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Plan to Control Tightly Use of Wood Pulp

Head of Office of Pulp Allocations At Meeting of Association of Pulp Consumers Stated War Production Board Will Strictly Direct Use and Delivery of Wood Pulp—Heavy Post-War Demand Likely.

A plan to control completely the end-use of wood pulp was disclosed at a meeting of the Association of Pulp Consumers at the Waldorf-Astoria Hotel, New York, last week.

David B. Graham, head of the new Office of Pulp Allocations under Forest Productions Chief Harold J. Boeschenstein, stated that the War Production Board will so direct the use and delivery of wood pulp that the required quantities of paper and paper board will be produced to meet the essential uses as determined by the WPB.

"The exact quantity of these products which is considered to be essential will be determined by the Requirements Committee, the same committee which has determined the requirements of such scarce materials as copper, aluminum and steel," Mr. Graham said. "Wood pulp is now one of them. The Requirements Committee is representative of eighteen claimant agencies which include the War Food Administration, the Office of Civilian Requirements, the Foreign Economic Administration, the Army, Navy, etc.

Determination of Essentiality

"We are now faced with the determination which we have faced for two years," he warned. "However, a substantial proportion of practically every grade of paper and board is essential."

In order to carry out this program, WPB is drawing up new forms on which pulp and paper mills will report, he added. Pulp mills will be asked to estimate their production for the first quarter. Similarly, paper mills will be requested to estimate the amounts and types of paper products they will manufacture during this period, and the quantities and grades of pulp they will need, he said.

Paper mills will also be asked to determine the distribution of their products among various groups of users. WPB will give each segment of the industry a specified list not exceeding ten groups for this purpose. From this information, WPB will draw up the new pulp allocations, Mr. Graham said, which will be made on a quarterly basis.

The revised pulp allocation plan has been developed not only by WPB but by various industry advisory committees, he emphasized. In allocating pulp on the new quarterly basis, WPB will follow its former policy of distributing the pulp so as to get the maximum utilization of waste paper and other substitute fibers.

Future Curtailment Likely

"If the supply is not sufficient in the first quarter to meet all demands of paper and board, WPB plans to reduce the consumption through the issuance of limitation orders," Mr. Graham stated. However, he advised the group, "not to be surprised" if further limitations on consumption of paper by "important users" would be issued as of January 1.

Briefly summarizing the critical supply situation, Mr. Graham warned that "the pulp situation is worse than you think." Inventories of pulp in the hands of non-integrated mills dropped from 480,000 tons at the end of Septeember, 1942, to 231,000 tons at the end of September, 1943. Inventories of waste paper in paper mills fell from 579,000 tons to 292,000 tons in the same period. Pulpwood stocks were drawn down from 4,000,000 cords in September, 1942, to 2,800,000 cords a year later.

Pulp supplies have been declining at the rate of 21,000 tons a month, and pulpwood receipts have been dwindling by 100,000 cords a month, he revealed.

Receipts of Pulpwood Low

A. B. Hansen, president of the Northern Paper Mills, Green Bay, Wis., and director of WPB's Office of Pulpwood Production, warned that although cut wood receipts had improved in September and preliminary October figures showed a further increase, the problem of increasing the supply of woods labor is far from solved, moreover, as it sometimes takes two years to get the wood to the mills. He also discounted trade rumors that imports of Scandinavian pulp would soon be available.

"We are now working through the country war boards of the War Food Administration, the farm bureaus, the granges, the Boren committee, the Dear committee and War Activities Committee," Mr. Hansen said, "to try to convince the farmer of the need

(Continued on page 21)

Forests Are Being Opened to Cut Pulpwood

Timber Production War Project Sponsored By U. S. Forest Service And War Production Board Calls For Bids On Dead Timber and Stumpage — Tuttle Press Co. Changes Hands — Other Mill News.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 8, 1943—Extensive acreages in federal, state and county forests are being made available for selective cutting of pulpwood, in carrying out the Timber Production War project sponsored jointly by the United States Forest Service and the War Production Board. Calls for bids are now numerous on all dead timber and stumpage marked for cutting, and loggers ar expected to respond to help meet the critical need.

Proposals from the State Timber Marketing Committee at Madison, Wis., include the following:

137 acres in the Marquette National Forest, with bids to be submitted by November 19 to the Forest Ranger, Raco, Mich., or Forest Supervisor, Escanaba, Mich.

480 acres in Chequamegon National Forest, Wisconsin, bids by November 22 to Forest Ranger, Hayward, Wis., or Forest Supervisor, Park Falls, Wis.

509 acres in Ottawa National Forest, Michigan, bids by November 15 to Forest Ranger, Kenton, Mich., or Forest Supervisor, Ironwood, Mich.

126 acres in upper Michigan, bids by November 26 to Forest Ranger, Watersmeet, Mich., or Forest Supervisor, Ironwood, Mich.

The commissioners of Public Lands, Madison, Wis., are also offering for public sale large selective cuttings in Forest and Ashland Counties, for which bids are to be submitted by November 16. Additional stumpage in Vilas County is announced by the Wisconsin Conservation Commission, with bids to be placed by November 20 at State Forest headquarters, Trout Lake, Wis.

Galen W. Pike, recently appointed as area forester for the Timber Production War Project, has now established his offices with the Wisconsin Conservation Commission, State Office Bldg., Madison, Wis. He has assigned field representatives to every county in the state to give timber owners advice on logging and marketing. Most farmers have now been informed of the Victory Pulpwood Drive, and results are beginning to be seen. Those who cut balsam for pulpwood are being told of the extra inducement through the sale of well-shaped tops for Christmas trees, pointing out that the scarcity on city markets will bring two or three times the value from the tops as for the pulpwood.

Kraft mills are already receiving truckloads from the farmers because of the plentiful supply of jack pine and other such varieties available, and the ease of cutting the smaller trees. The Thilmany Pulp and Paper Company, Kaukauna, Wis., is receiving its biggest supply from the cutover lands near Three Lakes, Wis., and some deliveries from farmers nearer at hand. Mills which use only spruce or balsam, such as the Combined Locks Paper Company, Combined Locks, Wis., and the Interlake division of the Consolidated Water Power and Paper Company, Appleton, Wis., are not as fortunate because woodlots do not produce much of these varieties. They are using their stockpiles to augment the dwindling shipments from Canada.

Sale of the Tuttle Press Company, Appleton, Wis., was announced last week by the Northern Paper Mills, Green Bay, Wis., of which it has long been a subsidiary. The purchasers include some of the men who have been managing the industry and some additional stockholders.

No changes either in officers or personnel are contemplated. The present officers are: Roy H. Purdy, president, treasurer and general manager; W. E. Buchanan, vice-president, and L. R. Watson, secretary. Mr. Buchanan and Mr. Purdy also are associated with the Appleton Wire Works, Appleton, Wis., of which the former is president and general manager.

The Tuttle Press Company has been in the converting field for many years, largely in the manufacture of crepe paper specialities and gift wrappings.

John Strange Co. to Rebuild Warehouse

The John Strange Paper Company, Menasha, Wis., will rebuild its warehouse destroyed in a $75,000 fire October 22, according to announcement made last week. Although the former structure was four stories in height, the new one will be smaller and one story only.

Application has been made under priority regulations for the materials needed, since its production, largely in box board, is almost 100% essential to government and civilian prosecution of the war. It is believed that sanction can be obtained. Operations of its paper mill underwent practically no interruption because of the fire, although a substantial stock of waste paper was destroyed.

The George Banta Publishing Company of Menasha, which lost a quantity of finished goods stored in the warehouse, is planning to build an entirely new plant after the war in a less congested location. The firm has purchased 27 acres of land between Menasha and Appleton, Wis., located on a railroad siding, and intends to transfer its equipment from time to time until removal is completed.

Converting Industry May Join C.I.O.

Possibility that the converting industry will have unions affiliated with the C.I.O. is seen in an announcement by Leonard Shaw of Elkhart, Indiana, director of the United Paper Novelty and Toy Workers Union for Indiana and Michigan. He said locals from these two states were to decided at a meeting of the general executive board in Philadelphia on separation from the parent international headquarters of the union. It was reported that these two states voted to join Ohio, West Virginia, West Pennsylvania, Illinois and Wisconsin in the secession movement. Shaw said arrangements for a C.I.O. charter are being made, and the new group probably will be known as the Paper Workers' Union.

Beloit Iron Works Gets "E" Award

The Beloit Iron Works, Beloit, Wis., has been

awarded the Army-Navy "E" production award, according to word received from Washington. In peacetime, the company is one of the largest builders of paper and pulp machinery, but now is devoting its production to munitions and war equipment. Arrangements for the ceremonies have not yet been completed.

R. J. Watts Resigns From Paper Institute

Ralph J. Watts, who has been treasurer of the Institute of Paper Chemistry, Appleton, Wis., since its inception in 1929, has resigned his position, according to announcement of Ernst Mahler, executive vice-president of Kimberly-Clark Corporation, Neenah, Wis., who is president of the board of trustees.

Mr. Watts is serving as acting president of Lawrence College at Appleton, due to the recent resignation of Thomas N. Barrows, who is moving to a milder climate in the interest of his health.

John C. Strange, secretary of the Institute since 1936, will combine his office with that of treasurer. The changes became effective November 1.

Moore-Bergstrom Nuptials

The marriage of Miss Alice Perry Bergstrom, Neenah, Wis., and Lieutenant Hugh R. Moore of Oshkosh, Wis., took place at the First Presbyterian Church at Neenah Saturday afternoon, November 6. A reception followed at the North Shore Golf Club. The bride is the daughter of Mr. and Mrs. Nathan Bergstrom, and her father is vice-president and secretary of the Bergstrom Paper Company. Lieut. Moore served with the Marine Corps Aviation at Guadalcanal, and is now stationed at Cherry Point, N. C., where the couple will reside.

Universal Paper Co. Increases Stock

Capital stock of the Universal Paper Company, wholesalers of Appleton, Wis., has been increased from $50,000 to $100,000, according to an amendment to the articles of incorporation filed recently. The number of shares was increased from 500 to 1,000. The company recently changed its name from Marshall Paper Corporation, which had purchased the long-established business of the Marshall Paper Company.

Marinette Co. Appoints Superintendent

Harry Munson has been appointed superintendent of the converting department of the Marinette Paper Company, Marinette, Wis., according to announcement by Darcy B. Wilkinson, general manager. He succeeds Winfield Whitaker, who resigned after holding the position since the fall of 1941. Mr. Munson has long been an employee of the company.

Dr. Van den Akker Granted a Patent

Dr. J. A. Van den Akker, of the research staff of the Institute of Paper Chemistry, Appleton, Wis., has been granted a patent on his invention of an apparatus for measuring water resistance of paper. The patent rights have been assigned to the Institute.

Heads Columbia Box Board Mills

CHATHAM, N. Y., November 8, 1943—Charles W. Howarth, secretary of the Columbia Box Board Mills, Inc., has been elected president of the company to fill the vacancy caused by the death of Matthew J. Gray.

Asks Adv. Men to Use Less Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 10, 1943—Some 1,200-odd advertising agencies were appealed to today by Harold Boeschenstein, Acting Director of the War Production Board's Forest Products Bureau, to reduce paper consumption in all types of promotional and advertising matter, the WPB said.

Advertising firms are vitally interested in the Nation's paper problem since that materials is essential for the continuation of their business, Mr. Boeschenstein pointed out. Originators of ideas requiring paper for their presentation should, through careful planning, present them in a manner which will publicize the visual messages using the least possible paper. Wasteful and extravagant uses of paper and paper board must be discontinued, he added.

It is the hope of the War Production Board that this saving of paper may be accomplished to a large extent through the cooperation of all advertising agencies, and voluntary conservation by advertisers and the general public, Mr. Boeschenstein said.

In their planning of promotional matter, he urged advertising agencies to assist in paper conservation by recommending the use of the lightest paper practical, reduction margins to a minimum, and cutting down paging and sizes, whenever possible, and saving paper by any other means which suggest themselves. He also stressed the need of revising and curtailing mailing lists in order to save paper, paper board, and envelopes.

Awards Forestry Prizes

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 8, 1943—Two grand prizes for outstanding forestry work in the lower St. Lawrence region amounting to $100 and $50, and accompanied by a trophy donated by the Anglo-Canadian Pulp and Paper Company, were awarded to Placide Valcourt, a settler of St. Leo le Grand Matapedia County, and the 4H Club of St. Joachim, Gaspe, according to an announcement by the Forestry Association of Quebec, Inc.

Mr. Valcourt, who received the trophy and $100 during the recent congress of the association, held at Gaspe, had accomplished an extraordinary improvement in his forest, which included new planting and cultivation of terrain from which he draws yearly about $400 worth of fire wood, the statement explained. The 4H Club of St. Joachim which was awarded the $50 prize had planted a long row of trees along the highway near St. Joachim and looked after their growth and replanting.

The region of Montreal North has been chosen by the association for next year's awards.

Helpful Gasket Chart Available

An up-to-the-minute gasket chart showing the cross-sections of 36 most popular gasket types, their purposes and the characteristics which fit them for the specific services intended, is now available to interested engineers.

This chart is featured in the second issue of "The Gasket"—a series of technical papers on gaskets compiled by the Research Laboratory of the Goetze Gasket and Packing Company, Inc., New Brunswick, N. J., oldest and largest manufacturers of industrial gaskets in America.

Wisconsin Committee Reports Activities

Highlighted by Governor Goodland's interest in sustained forest industries production to the citizens of the State, the Wisconsin committee, headed by Folke Becker, President, Rhinelander Paper Company, reports important activities for October.

Governor Goodland's Proclamation

Governor Walter S. Goodland's proclamation calling for increased production of forest products, after being delayed awaiting the most effective time for publication, was finally released. The text was circulated in all the state newspapers as well as having a wide coverage in the national press. It being generally conceded that increased pulp, logs, and bolts must largely depend upon the facilities of the farm wood lots and smaller holdings, so the appeal was primarily directed to this type of supplier who was urged to produce from his own timber or to accept some employment in the forest industries.

The Governor is now fully aware of the importance of these products and is disposed to apply any reasonable means to augment timber supplies. Instructions have been issued to canvass the possibilities of using timber on State owned lands, some sales of which have been already approved.

Presents Souvenir Propeller

Harold S. Crosby, Secretary, on behalf of all the forest industries in recognition of the Governor's interest in forest products, presented a wooden airplane propeller made of Wisconsin Birch lumber by a Watertown, Wis., manufacturer. The propeller is of the standard type such as used by the Army Air Forces on trainers. Taking part in the ceremony were W. W. Weber of the U. S. Forest Products Laboratory and F. B. Trenk, Extension Forester representing the University of Wisconsin and the Conservation Department, which organizations are rendering valuable war services.

Supplementing the wide national publicity, campaigns of newspapers in forest areas, and the work of local committees, personal follow-up letters are now being directed to some 600 County Supervisors or Town Chairmen throughout the timber region emphasizing the importance of forest products and appealing for local action to put plans into effect.

Important Industry Meets Are Held

Several important industry gatherings were held during the month. One on October 22nd called by Mr. A. B. Hanson, Chief, Pulp and Paper Division, War Production Board, Washington for the purpose of discussing production prospects and methods of improving the supply situation. Subjects discussed included newspaper advertising, employment of war prisoners, morale building among workers, manpower regulations and government aids. Unfortunately the notice of this meeting was too short to insure a complete attendance of the mills, but in spite of this circumstance, it was an exceptionally good meeting. Mr. Hanson explained the organization of the Paper and Pulp Division, introduced his assistants Messrs. M. H. Collet and M. J. Burns, announced that Frank Kelly of the Northwest Paper Company had been placed in charge of WPB matters pertaining to the Lake States District with offices in Green Bay and urged cooperation from all the mills.

Exhibition and Round-Up Publicizes Paper

The same evening an exposition of paper products in Rhinelander's Memorial Building was conducted as a means of stimulating local enthusiasm and on the following day occurred the first pulpwood round-up at Tomahawk. The Tomahawk Round-up, climaxing the campaign of the North Central Wisconsin Victory Pulpwood Committee, included a parade of truck loads of wood which competed for War Bond Prizes, with colorful high school bands from Tomahawk, Merrill and Rhinelander and several addresses by state officials and pulp and paper executives. S. B. Bugee, president of the Tomahawk Kraft Company, played the part of host to industry notables including A. P. Woodson and Norman Stone of Mosinee Paper Mills; Stanton Mead and E. B. Hurst, Consolidated Water Power and Paper Company; D. B. Smith, Ward Paper Company; Harold Collins and Chester Cone, Wausau Paper Mills; K. S. Dickinson, Tomahawk Pulp Company; R. M. Andrews, Minnesota and Ontario Paper Mills; E. E. Zahn, Marathon Paper Mills; W. F. Whittaker and R. L. Caldwell, Rhinelander Paper Mills, and H. L. Fitze and C. G. McLaren, Tomahawk Kraft Paper Company, besides officials representing the Governor, Wisconsin Conservation Department, University of Wisconsin, the War Production Board, the U. S. Forest Service, Office of Defense Transportation, etc. There is no question but this demonstration had a profound impression upon the local citizenry who not only turned out for the ceremonies, but decorated their premises in an appropriate fashion. Pulpwood producers reacted to the newly acquired sense of responsibility to the war hinged upon their productive efforts.

National Committee Meets

Among the first to become organized and aggressively embarked upon the purposes of the organization, Chairmen Folke Becker of Wisconsin and L. A. Furlong of Minnesota were widely complimented upon the accomplishments of their committees at a meeting of the State Chairmen in Chicago on October 28. Apparently these two states are setting the pace for all of the others. The Forest Industries Council met the following day resolving to stimulate committee organization in the South where it was lagging. Among the recommendations resulting from the meeting was a proposal for interchange of committee reports, a suggestion that activities be broadened wherever state committees decided this was desirable, and a closer working relationship between state committees in the same region.

Forestry Unit Returns to Canada

Two thousand members of the Canadian Forestry Corps have returned from Great Britain to Canada to help cut wood in Canadian forests for much-needed lumber and pulp. They form only a small part of the Forestry Corps overseas. The corps of Canadian woodsmen will be divided into two parts, one to go to work in British Columbia forests and the other to woodlands in Eastern Canada.

WPB Explains New Newsprint Order

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 10, 1943—Economy in the current consumption of newsprint during the fourth quarter of 1943 is going to be well worth while to newspaper publishers.

Three new features are set out in an amendment to Newspapet Limitation Order L-240, issued today by the WPB Printing and Publishing Division. They are effective November 1, 1943, and comprise the following:

A clause permitting a carry-over of print paper savings from the fourth quarter of 1943 for use in the first quarter of 1944;

A paragraph requiring all newsprint orders to carry a certification provision, and

A clause reducing newsprint ceilings in the hands of publishers, to give effect to the 10% reduction in the allowable tonnage consumption in the fourth quarter of this year.

The application of the first of thees new provisions, H. M. Bitner, Director of the Printing and Publishing Division, pointed out, will permit publishers who actually use less print paper than they are permitted to use in the fourth quarter of 1943, to increase their consumption in the first quarter of 1944, by the amount saved. This new provision, Mr. Bitner stated, will encourage publishers to start conserving right now in order to cushion the effect of the drastic cuts in paper usage expected to be imposed beginning on January 1, 1944. This amenedment has the approval of the Newspaper Industry Advisory Committee.

Incorporation of a certification clause in Order L-240 has been advocated by the N.I.A.C. ever since the inventory restrictions were added in July, 1943, but had not been approved by the WPB, because of its general policy against imposing additional paper work upon industry. However ,in view of the newspaper industry's urgent and repeated request for such a regulation, the clause has now been inserted.

The new provision requires publishers to certify in all orders for newsprint that the amount of paper so ordered will not exceed the limitations on deliveries which are imposed upon them by the order. Such certifications must be signed by a duly authorized company official, it was pointed out. Paper mills are prohibited, under the clause, from supplying publishers with print paper except when orders are certified as required by the amendment.

Control over inventories was previously fixed at a maximum of 40 days' supply in northeastern states, and 65 days' in southern and western states, computed on the basis of average daily consumption during the first six months of 1943. The new amendment reduces these ceilings by 10%, Mr. Bitner added, explaining as follows:

A newspaper publisher may not now order or accept more paper than his monthly permissible consumption. If the tonnage ordered, added to stocks on hand, will increase his inventory to a point higher than the allowable ceiling, paper orders must be reduced accordingly. As provided before, certain exceptions are made for orders of less than one carload, and inventories of less than two carloads.

Newspaper publishers have been directed by Mr. Bitner to notify the WPB Printing and Publishing Division as to the extent of any reduction in orders of newsprint filed with paper mills. Any such reductions should include, not only the 10 per cent cut imposed on inventory ceilings, but also, reduction resulting from pledges voluntarily made by a number of the larger publishers for cuts below their permitted ceilings, he explained.

To date, voluntary curtailments in newsprint orders by a large number of large newspaper publishers indicate that reductions from that source in November orders will probably equal the conservation of newsprint necessary to prevent another cut in usage during the present quarter.

"Adventure in Vermont"

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 8, 1943—"Adventure in Vermont," the latest book by Walter Merriam Pratt, a well known figure in the paper trade, head of the Pratt Paper Company, merchants, was published October 1 by Ralph T. Hale & Co., 3 Joy street, Boston. The paper for the book, printed by the University Press, was made by the Amoskeag Paper Mills, Manchester, N. H., 25x38, Basis White Antique.

In this book Mr. Pratt has written of his and his wife's experiences in the restoration of a beautifully located farm in the foothills of the Green Mountains, near Brattleboro, which they purchased in poor condition and brought back to where it is now, a living reflection of the life of former days.

The book is a practical guide for those wishing to do the same and avoid the pitfalls which attend such enterprises.

As a background to his story of the restoration, Mr. Pratt also writes in an interesting manner of the early history of Vermont. There are many old drawings of men prominent in the early days of the state reproduced in the book, as well as a complete pictorial record of the work in restoring the farm.

Mr. Pratt's other books include The Burning of Chelsea, 1908; Tin Soldiers, The Militia and What It Really Is, 1912; History and Year Book, Military Order of the World War, 1922, 1923, 1925; The Maritime Provinces as Seen from an Automobile, 1915; Seven Generations—A Story of Prattsville and Chelsea, 1930.

Paper Board Men Meet Next Month

The annual meeting of the National Paperboard Association will be held at the Waldorf-Astoria Hotel, New York, on November 18, 19. The meeting is called for the election of officers and for transacting other important business. An interesting program is now being prepared, which will include timely reports.

The program for November 18 begins at 12:30 P.M. with a pre-luncheon gathering in the Starlight Roof on the 18th floor, on which all meetings will be held.

The first business session is scheduled for 2 P.M. and includes reports of officers and members of the staff.

The program for November 19 includes the report of the board of directors, reports by officers and members of the staff, and a general discussion. The annual meeting concludes with a buffet luncheon.

Early reservations are requested and should be made to H. S. Adler, secretary, National Paperboard Association, 80 East Jackson boulevard, Chicago, Ill.

New TAPPI Members

The executive committee of the Technical Association of the Pulp and Paper Industry has elected the following to membership:

W. F. Barrington, manager, Package Design and Development, Somerville, Ltd., London, Ontario, Canada, a 1918 graduate of Central Technology (Toronto).

Douglas A. Crocker, assistant secretary, the Tissue Association, 122 East 42nd Street, New York City, a 1907 graduate of Biltmore Forestry School.

Edward R. Duffie, chemist, Meredith Publishing Company, 1716 Locust Street, Des Moines, Iowa, a 1925 graduate of the University of Chicago.

Darnell Every, secretary-treasurer, Kraft Paper Association, Inc., 122 East 42nd street, New York City, a 1928 graduate of Yale University.

Paul M. Foster, sales manager and treasurer, Williams-Gray Company, 221 N. LaSalle street, Chicago, Ill., a 1917 graduate of Purdue University.

C. J. Kaiser, director of Technical Development, Reichhold Chemicals, Inc., Detroit, Michigan, a 1925 graduate of Notre Dame.

Maurice Klein, chemical engineer, Technical Service Department, Union Bag & Paper Corporation, Savannah, Georgia, a 1940 graduate of Georgia School of Technology.

Arthur W. Neubauer, Technical Sales Service, The Glidden Company, 5165 West Moffat street, Chicago, Ill., a 1931 graduate of Reed College. Received M. A. Degree at Cornell University in 1933.

Allen F. Owen, General Manager, Latex Fibre Industries, Inc., Beaver Falls, N. Y.

Vance Vernon Vallandigham, chemist, Kelco Company, 75 E. Wacker Drive, Chicago, Ill. Attended Wright College, Chicago.

Donald E. Woodward, assistant superintendent, Raymond Bag Company, Middletown, Ohio.

Chesley S. Young, technical adviser, Glue and Gelatine Departments, Swift & Company, Chicago, Ill. B. S. Degree, Massachusetts Institute of Technology, 1931; M. S. Degree, Colorado School of Mines, 1933.

Delaware TAPPI Discusses New Papers

The Delaware Valley section of the Technical Assoation of the Pulp and Paper Industry met at the Engineers' Club in Philadelphia on Friday evening, November 5. After dinner, various members of this section described briefly new developments and displayed unique paper products being made by their mills for the war.

F. W. Brainerd of Scott Paper Company sketched some of the problems encountered in developing special wet strength creped tissues to replace the formerly used high priced lens paper of extra long Japanese fibers, and wiping rags for machine parts. He also showed samples of the colored tissue inclosed in the "K" ration packages.

W. E. Butler of the Glassine Paper Company displayed samples of their special noncorrosive wrapping paper for highly polished metal parts, cigarette paper and chocolate wraps.

A. L. M. Bixler displayed several types of laminated board products produced from impregnated papers made by the Riegel Paper Company. Dr. Bixler indicated the various arrangements of the impregnated sheets before lamination to obtain special types of strength in the finished product.

Paul Barrow from the Container Corporation of America brieby outlined the history of the development of the "V" Boxboard, giving the specifications at each stepped-up requirement. He remarked that just about all that could now be added was outboard motors to send V boxes across under their own power.

The product which attracted the most attention was the large gas tanks developed to extend the range of fighter planes made from special treated fiber made by the National Vulcanized Fibre Company. John Macadams of that company also displayed the fiber inserts of a new type of nut and screw for airplane construction.

Howard J. Angstadt of Keasbey & Mattison Company described their success in extending felt life in spite of poor water conditions and displayed a reinforced asbestos paper with water resistant properties they had developed.

Mr. McInnes of the Pusey & Jones Corporation stated he could hardly display in the club room any of the ships they were building instead of paper machines, and that their engineers were still giving much thought to new developments for future paper machines.

Those attending the dinner preceding the meeting included: Wm. J. Burke, Edw. J. Albert, Howard J. Angstadt, Paul V. Barrow, A. L. M. Bixler, F. W. Brainerd, W. E. Butler, C. M. Connor. Lester W. Crouse, J. D. Davis, Harold W. Donnelly, Harrison J. Farra, E. N. Glauner, Jesse Good, Lois V. Hans, A. M. Hartley, H. F. Hoffmann, Harry Hulmes, Willard H. Lapp, A. A. Lofquist, John Macadam, George B. Martin, Ruth R. McConky, E. P. McGinn, Alex. McInnes, Edw. C. Molin, W. B. Morehouse, George Morrin, Walter P. Quinn, Chas. W. Rivise, A. H. Nadelmann, John Roslund, Edw. A. Shallcross, Sr., Wm. N. Shoemaker, Chas. A. Shubert, E. T. Street, George M. Suydam, Richard Temple, Kingdon R. Watt, A. E. Waugh, A. H. Webber, Almeron W. Wickham.

Anyone inteersted in receiving notices of future meetings in this section are invited to send their name and address to the Secretary of the Section—Lois V. Hans, Experiment Station, Hercules Powder Company, Wilmington, Del.

Mansfield Plant Gets Army-Navy E

MANSFIELD, Mass., November 8, 1943—The Hercules Powder Company, Synthetic Department, received the Army and Navy Production E Award here with due ceremony, October 28. George C. Shields, the presiding officer, president of the Shields Foundry Company, gave an address of welcome. Colonel Frank O. Robinson, of the U. S. Army, Camp Miles Standish, presented the Army E Award. Lieutenant Commander Thurman Randle, Naval Training School, Newport, R. I., presented the Employee E Emblems.

Those representing the company employees were Warren Chapman; Dorothy Guglielmi; R. L. Schlaanstine, director of operations, and R. L. Marsh, technical director.

The employee emblems were accepted by Carl Anderson, John Lanigan, Frank Gonsalves, Virginia Storm, and John Lyman. Part of the program consisted of selections by Camp Myles Standish Band.

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WM. LINDSAY — President, 1903-1932

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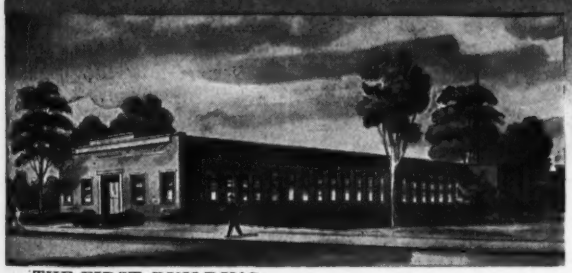
The importance of *quality* has *not* changed. Today, it is more paramount than ever. Year after year the quality of Fourdrinier wire cloth has improved in reference to mesh, seaming, selvedge, and the metal itself. Over-all, the width of Fourdrinier wires has nearly doubled to cope with new requirements as they arose, and special applications have been multiplied many-fold.



THE FIRST BUILDING . .

. . THE PLANT TODAY

Lindsay serves the paper industry exclusively. We have sought to contribute materially since 1903 to the progress of wire cloth manufacture and hence to the quality of paper. Forty years of such specialization necessarily create for us an obligation to do our part just a little better every day. Lindsay wire cloth will continue to uphold those ideals of excellence which were set for us by our founder.

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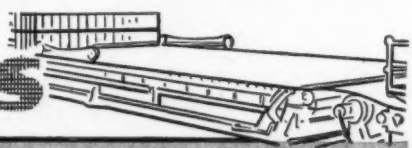
14001-14299 ASPINWALL AVE. CLEVELAND 10, OHIO

Lindsay **WIRES** FOR PAPER MILLS



To be Supervisor of Technical Service

Diamond Alkali Company announces the appointment of Chas. W. Rippie, Ph.D., as supervisor of technical service, effective September 1. Dr. Rippie will make his headquarters in Painesville, Ohio, where the main works operations, together with research and development laboratories, of the Diamond Alkali Company are located. In addition to regular technical service, he will work in close collaboration with production, research and sales in establishing the new products which Diamond Alkali Company is adding to its line.

CHARLES W. RIPPIE

He is an active member of American Institute of Chemical Engineers, American Chemical Society, American Petroleum Institute, Society of Automotive Engineers, and Chemists' Club of New York. Dr. Rippie graduated from the University of Illinois in 1926 in Chemistry and Mining Engineering.

He is well known to the oil refining fraternity due to former employment by Shell Oil Company as assistant to Vice President in the Manufacturing and Sales Divisions, and for technical service work performed in the petroleum refining industry. He was with Monsanto Chemical Company immediately prior to joining the Diamond organization.

Indianapolis Reports Heavy Demand

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 8, 1943—Heavy orders for all grades of paper continued to be received here during the last week. Manufacturers and jobbers have about given up any hope of filling many of the orders and the backlog continues to grow. What the outcome will be is problematical.

Paper manufacturers say they are finding it increasingly difficult to get raw materials and the help problem has not been solved. This area has been designated critical by the manpower commission and all employees frozen to their jobs, but this does not help for the factories were short of help before this ever was done. Nor are the wholesalers in much better condition. With truck equipment becoming more obsolete with each month and help virtually unavailable, the situation is anything but pleasant. Jobbers are behind with their orders and in some instances there are grades entirely out of stock.

Every effort was being made here last week to stimulate collection of waste paper. The general public remains rather apathetic. They recall the scare that was thrown into them after Pearl Harbor when tons on tons of waste paper were collected in Indiana and it was found the paper either was not needed or could not be used. It will take a lot of doing yet to make the average person pay much heed to the cry for more waste paper. The waste paper trade now is confronted with other problems also. The ability to collect available supplies is not nearly so good as it was a couple of years ago. Trucks or manpower or both are lacking. However, mills continue their demand and what paper stock is on hand is finding a ready market at full ceiling prices. Much the same is true of rags. Mill demand is heavy with all grades active and prices at the ceiling.

Fine paper demand last week was active. Several grades were very scarce and jobbers are behind with orders. Tissues also were in good demand. No change was seen in the wrapping and paper bag demand. It continued heavy and with the holidays approaching there will be a real shortage.

Jack Major to Speak at Boston Dinner

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 8, 1943—With "Jeeps, Japs and Jokes" as his subject, Jack Major will be the speaker at the fall meeting of the Boston Paper Trade Association, to be held November 17 in the Hawthorne Room, Parker House. There will be shown over 600 feet of natural movies of our boys in the South Pacific; how they live, how they fight and what they are seeing. In addition a very recent release by the Austrian Government permits the showing of pictures of the Bismark Sea naval battle.

The membership committee has approved the application for regular membership from H. J. Dowd, H. H. Dowd Company, Inc., East Cambridge, Mass., proposed by Carl J. Knutson; limited membership from M. C. Dobrow, secretary, Writing Paper Manufacturing Association, New York City, proposed by John D. Zink, and to transfer from regular to associate membership from Albert M. Eaton.

Reception will be at 6 P.M. and dinner at 6:30 P.M.

Cooper-Bennett Nuptials

The marriage of Mrs. Charlotte A. Bennett to Bert H. Cooper was solemnized Sunday morning, October 10, at the home of the bride's parents, Dr. and Mrs. Justin H. Bacon, Grove street, Kalamazoo, Mich. The Rev. T. Thomas Wylie, First Baptist church pastor, read the service, and the couple was unattended.

The bride was attired in a navy silk alpaca dress, with turquoise trim, for the occasion, and her corsage was an orchid.

Following the service, a wedding dinner was enjoyed in the Red Brick Tavern, and later Mr. and Mrs. Cooper left on a week's trip to New York, N. Y.

Mr. and Mrs. Cooper will be at home in 141 South Prairie avenue. Mrs. Cooper has been employed as a secretary in the legal department of the Upjohn company for the last three years. Mr. Cooper is vice president of the Kalamazoo Paper company.

Three Generations at Tarentum Mill

The spirit of loyalty that has characterized the workers in American industry is evidenced at the Tarentum Mill, where three generations of the same family are at work. The Tarentum mill is proud of its workers and particularly proud of the trio in the

PRODUCE PAPER FOR VICTORY

picture above: J. V. Mason, J. S. Mason, and Alvin Mason. The Tarentum mill was established in 1866, and is today producing the same high quality products, geared for production for victory.

Sends News Letter to Service Men

[FROM OUR REGULAR CORRESPONDENT]

VANCOUVER, B. C., November 6, 1943—At the outbreak of the present conflict, almost one-third of the employees of the Powell River Company were veterans of the First Great War. For over twenty-five years the absorption of ex-service men had been a definite part of the company's employment policy.

The management was in personal contact with ex-service men executive committees, contributed to their social and welfare funds, loaned their facilities and assisted the association in its efforts to procure pensions, allowance, etc., for members.

When the first group of Powell River men arrived overseas in 1940, the company arranged for the despatch of regular shipments of cigarettes to these boys every three months. Today, there are nearly 300 employees overseas and to these men alone the company despatches 750,000 cigarettes annually—or 2500 per man. In addition, 500 cigarettes are mailed for Christmas to every employee stationed in Canada, and serving with the armed forces.

Early last year, H. S. Foley, president of the company, felt, that despite the satisfactory relationship then existing beteween the company and its service employees, something more personal and intimate might be developed to further cement and enhance this bond.

With this idea in mind, a monthly news letter was conceived and developed.

The news letter idea, judging by reports received from Powell River boys and girls overseas, is not a common practice among Canadian industrial firms.

As far as is known, the Powell River Company is one of the few, if not the only Canadian firm, that publishes a regular monthly letter to its service employees.

Indorses A. N. P. A. Pulpwood Drive

Secretary of Navy Frank Knox has indorsed the newspaper drive to Cut-a-Cord of Pulpwood for Every Local Boy in Service in a letter addressed to Walter M. Dear, chairman of the Newspaper Pulpwood Committee, which is directing the drive in 27 pulpwood-producing states.

"The pulpwood cutter and the U. S. Navy have the same aim," Mr. Knox said. "It is to win this war as quickly as possible. One way to help reach this objective is to cut a cord of pulpwood for every local boy in service."

Secretary Knox pointed out that the Navy looks to the pulpwood producers of the Nation to provide enough raw material to package the food, equipment, and supplies being shipped to American and Allied forces overseas.

The Cut-a-Cord drive, which will climax the Victory Pulpwood Campaign, will be launched in 1200 pulpwood-producing localities on Armistice Day. Between that day and December 11, when the special drive ends, the committee expects enough extra cords of pulpwood to be cut to match the number of boys in service from these areas.

The Victory Pulpwood Campaign is being conducted by the newspapers at the request of the War Production Board to overcome a threatened shortage of 2,500,000 cords of pulpwood below minimum military and essential civilian requirements for 1943.

Cleaning Methods for Paper Mills

Giving war-practical data to help pulp and paper mill executives expedite maintenance cleaning, shorten down-time of equipment and conserve manpower is a third revised edition of a 28-page illustrated manual just issued by Oakite Products, Inc., New York.

The manual describes fast, successfully used techniques and procedures for handling such important paper mill maintenance cleaning jobs as: removing slime from equipment; washing paper mill felts; cleaning, scouring and de-scaling wires; ridding dandy rolls, save-alls, suction boxes, head boxes and press rolls of pitch and other deposits; removing lime-scale from water-cooled equipment and many others.

Interesting data is also included in the manual on how the steam-detergent method has secured faster and greatly improved results in removing dirt, grease, grime and other accumulations from all types of paper processing machinery.

Free copies of this fact-filled booklet may be obtained by writing to Oakite Products, Inc., 57 Thames street, New York 6, N. Y.

Names Employment Committee

TROY, N. Y., November 8, 1943—Francis E. Gallagher, general manager of the Behr-Manning Corporation, has named an executive body on the Committee for Economic Development as the first step in this section's part of a nation-wide move to maintain a high level of employment after the war. Assisting him will be Howard G. Seaman, of the Behr-Manning Corporation, James F. Adams, president of the John A. Manning Paper Company, John W. Bright, president of the Stevens & Thompson Paper Company, Greenwich, and George Matthews, resident manager of the New York Power and Light Company.

Names Paper Board Committee

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 10, 1943—Twelve business men representing the various segments of the specialty paperboard industry were appointed to an industry advisory committee by the Office of Price Administration today. This committee will advise and consult with OPA on problems affecting the specialty paperboard group, a branch of the paperboard industry which specializes in the production of high-quality paperboards.

This branch of the industry is centered in the northeastern area of the United States, although some companies have producing mills in the southern and midwestern states. Consequently most members of the committee are from the Northeast. This group of manufacturers is subject to Appendix C of Revised Price Schedule No. 32 (Paperboard Sold East of the Rocky Mountains).

The committee, which will be known as the Specialty Paperboard Industry Advisory Committee, follows: Kendall Wyman, manager Champion Paper and Fibre Company, Hamilton, Ohio; A. K. Nicholson, vice president Hollingsworth & Voss Company, East Walpole, Mass.; Joseph Auchter, general manager Cherry River Paper Company, Camdem, N. J.; T. Stewart Foster, president, Foster Paper Company, Inc., Utica, N. Y.; C. A. Goodrich, general manager Case Brothers, Inc., Manchester, Conn.; Cecil M. Pike, secretary Spaulding Fibre Company, North Rochester, N. H.; W. S. Gamble, president Brownville Board Company, Brownville, N. Y.; F. Henry Savage, sales manager International Paper Company, New York City; Malcolm B. Lowe, vice president Lowe Paper Company, Ridgefield, N. J.; J. B. Cowie, sales manager Hollingsworth & Whitney Company, Boston; John A. Dodd, president The Davey Company, Jersey City, N. J.; Walter B. Sheehan, vice president Missisquoi Corporation, Sheldon Springs, Vt.

Legionaires Back Campaign

Warren H. Atherton, national commander of the American Legion, today made an Armistice Day appeal to Legionaries in 27 pulpwood-producing states to rally behind the newspaper drive to "Cut-a-Cord of Pulpwood for Every Local Boy in Service."

Commander Atherton's message to thousands of Legionaries in New England, the South, the Appalachian and Great Lakes region coincided with the climax of the Victory Pulpwood Campaign, now being conducted by more than 1200 newspapers to relieve the serious shortage of war-essential pulpwood.

The American Legion chief pointed out that pulpwood from the farms and woodlots today provides the Army and Navy with hundreds of war products and he urged all members to give the "Cut-a-Cord" drive their active support through their local newspapers.

"This pulpwood campaign gives us another opportunity to show our fighting men we're behind them with all we've got," Commander Atherton said.

The intensified Victory Pulpwood Campaign was started by the Newspaper Pulpwood Committee, with Walter M. Dear as chairman, when a shortage of 2,500,000 cords threatened the essential military and civilian requirements for 1943 as set by the War Production Board.

Packaging Institute Elects Officers

The Packaging Institute at its annual meeting held November 4-5, at the Hotel New Yorker, re-elected the following officers, to serve for one year: President, Joel Y. Lund, vice president, Lambert Pharmacal Company, St. Louis, Mo.; Vice President, A. Vernon Shannon, sales manager, Westfield River Paper Company, Russell, Mass.; Vice President, Wallace D. Kimball, 1st vice president, Standard-Knapp Corporation, Portland, Conn.

Two directors were elected by each division as follows:

Production—Gustav Winckelmann, vice president, Frankfort Distilleries Inc., Baltimore, Md.; T. R. Baxter, purchasing agent, Standard Brands, Inc., New York, N. Y.

Machinery—Frank B. Fairbanks, president, Horix Mfg. Co., Pittsburgh, Pa.; George A. Mohlman, president, Package Machinery Co., Springfield, Mass.

Supplies—Walton D. Lynch, vice president, National Folding Box Company, New Haven, Conn.; A. Vernon Shannon, Sales Mgr., Westfield River Paper Company, Russell, Mass. (re-elected).

Division Heads—Chairman, Production Division Charles A. Southwick, Jr., director, Research and Development, Shellmar Products Company, Mount Vernon, Ohio; President: Packaging Machinery Manufacturers Institute, Inc., George A. Mohlman, president, Package Machinery Co., Springfield, Mass.; Chairman, Supplies Division, H. A. Barnby, Dir. Package Division, Owens-Illinois Glass Co., Toledo, Ohio.

The semi-annual meeting of the Institute will be held on Wednesday evening, March 29, 1944, at the Palmer House, Chicago, Ill.

P. O. Deitsch Reports on Gummed Tape

Philip O. Deitsch, managing director, in his report submitted at the annual convention of the Gummed Industries Association held at the Hotel Carter, Cleveland, Ohio, on November 11 stated that the associations activities had run the gauntlet all the way from obtaining every conceivable form of critical supply entering into the manufacture of their finished product right down through the broader program of the declaration of the paper industry as essential by the War Manpower Commission on March 19, 1943. Mr. Deitsch also made mention of the fact that a new waterproof tape had been developed by one of the member companies and that this member company had by virtue of the Substitute Materials Program, in which they were participants, agreed to make the findings of their research, which had ante-dated the Substitute Materials Program, available to the industry through a system of licensing which they had developed and in which the association had no official part. Another important problem he stated had been that relating to adequate supplies of kraft paper.

Among the speakers at the convention were the following:—C. W. Boyce, special assistant to the director of the Paper Division of the War Production Board; Nils Anderson, Jr., chief of the adhesives unit of the Chemical Division of the War Production Board; Herbert T. Holbrook, Packaging Section of the Ordance Department and Captain John E. Franzen of the Jersey City Quartermaster Depot.

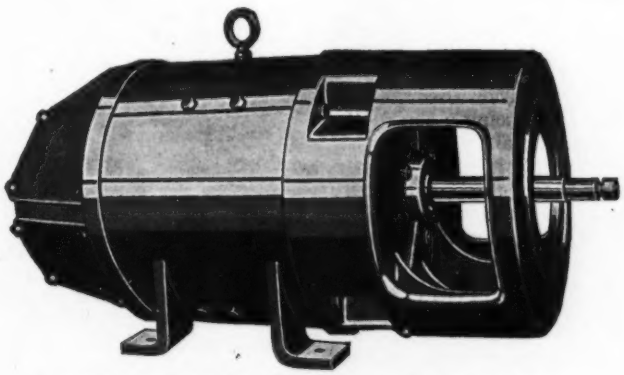
In the early days, this was the peak of streamlining.

STREAMLINING!

Streamlining adds more than beauty. For years, Reliance engineers have pioneered in streamlining electric motor-drives—*for utility and efficiency.*

Among recent developments are axial-flow fan motors, close-coupled pump motors, V★S Adjustable-speed Drive. These and other Reliance Motors are being used in many highly efficient paper mill installations where space is limited . . . where flexibility of power control and ease of operation are essential . . . where safety is a prime factor . . . and trim appearance desirable.

For further advantages of streamlined motor-drive and practical design suggestions, call in a Reliance man.



Reliance Splash-Proof D-c. Close-coupled Pump Motor. Pump is mounted right on the motor shaft—eliminates misalignment, saves space; fewer parts, less maintenance.

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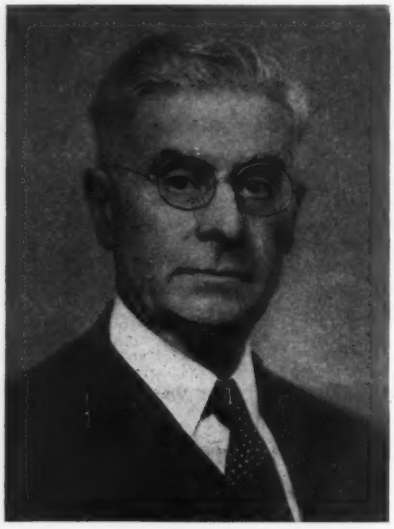
Obituary

Jabez Nortoh Ingalsbe

GLENS FALLS, N. Y., November 8, 1943 — Jabez Norton Ingalsbe, well known resident of this area, former supervisor of the town of Queensbury, and pioneer in the manufacture of wooden plugs, died early Saturday morning, October 2, of a heart ailment, at his home on Dixon Road. Mr. Ingalsbe, who had been in failing health for some time, appeared regularly at his mill, known as the Glens Falls Plug Works, until within a few hours of his passing.



JABEZ N. INGALSBE

He is survived by two sisters, Mrs. Sarah I. Murray and Miss Edith M. Ingalsbe of this city.

Mr. Ingalsbe was born August 30, 1873, on his father's farm in Hartford, N. Y., being a son of the late James L. and Delia Norton Ingalsbe. On moving to Glens Falls in 1892, he with his older brother, Paul D., and their father, began the manufacture of wooden plugs for the Allen Brothers Company, paper makers of Sandy Hill, N. Y., now known as Hudson Falls. The business increased steadily, now having become the chief source of wooden plugs for many of the largest paper mills throughout New England and the middle Atlantic States. Mr. Ingalsbe was an officer in the wooden plug industry under the NRA and represented many manufacturers of wooden plugs at the meetings.

Mr. Ingalsbe was a natural mechanic, inventing many improvements in wooden plug machinery, some of which are patented. In politics he was a profound Republican, always laboring for economy and efficiency in the administration of local affairs. He spent much time and effort protecting forest lands in this area from fire hazards. He was a lover of nature and animals. His favorite sports were trap-shooting and bird hunting.

His religious affiliations were with the Methodist Church. He was a member of the Masonic Order, F. & A. M. and in young manhood was an efficient teacher in the Y.M.C.A.

Mr. Ingalsbe, quiet, unassuming in manner, possessed sterling qualities, was opposed to the use of tobacco and stimulants and was greatly beloved by his employees and neighbors who deeply regret that the plant is to be sold.

Edward G. Goodell

Funeral services for Edward G. Goodell, Stevens Point Pulp and Paper Company executive, who died October 13, at Wisconsin General hospital at Madison, Wis., were held at the Episcopal Church of the Intercession. The body will be taken to Orange, Tex.

Manager and vice-president of the McDill mill, Mr. Goodell had many inventions patented. He submited more than 100 inventions for patent rights and none was rejected. Many of his inventions are being used abroad as well as in this country.

Mr. Goodell was born at Bay City, Mich., and when only a few months old the family moved to Detroit. He received his education at Detroit and Ann Arbor. He went south in 1903 and located at Orange, Tex., where in the same year he was instrumental in building the first paper mill there. He was part owner of the mill, which was the first in the south to manufacture paper by the sulphate process.

Mr. Goodell became interested in a mill at Braithwaite, La., in 1913, along with his interests at Orange. He came to Stevens Point in January, 1917, as engineer for the John Strange Paper Company of Menasha, and in that capacity constructed the present plant at McDill. The Stevens Point Pulp and Paper Company was then organized, as a subsidiary of the Menasha firm, and Mr. Goodell was named its manager and vice-president. He had served in these positions since.

Mr. Goodell was married at Orange on October 25, 1917, to Flavia Ochiltree of Orange. After a wedding trip the couple came to Stevens Point in December of that year and subsequently built the present Goodell home at McDill.

Surviving are his wife and a brother, C. C. Goodell of Sturges, Mich.

Mr. Goodell's death followed an illness of two years. He entered the hospital on July 21.

C. L. J. Ager

C. Leonard J. Ager, former paper manufacturer and lumberman, died at his home in Port Leyden, N. Y., on October 29, after an illness of six years.

Mr. Ager was born in Lyonsdale, August 29, 1869, son of Joel Wheeler and Julia F. Williams Ager. He was educated in Lyonsdale public schools and was graduated from Lowville Academy in 1891. After finishing school, he became affiliated with his father, a pioneer paper manufacturer in this locality.

The Ager paper mill, located at Lyonsdale, produced the first paper manufactured in Lewis County and the first run of paper from the mill was sold to Cyrus W. Field, famous builder of Atlantic Cable.

After the death of Mr. Ager's father in 1890, he continued the paper mill at Lyonsdale. At the turn of the century the manufacturing of paper was discontinued and he became actively engaged in the lumber business, which occupation he continued until the time of his illness. During this period of nearly 50 years he carried on extensive lumbering operations in the lower Adirondack region and at Dorset, Vt.

He was a member of Port Leyden lodge, F. and

A. M., and a life-long Republican. He belonged to Forest church, Lyons Falls.

In 1900 he married Miss Cora A. Smithling, Talcottville. The survivors besides his widow are two sons, Capt. C. Leonard C. Ager, Jr., Ogden, Utah; Joel W. Ager, Gloversville; two daughters, Florence A. Wellington, Lexington, Mass., Miss Esther Mary Ager, Summit, N. J.; and seven grandchildren. One sister survives, Mrs. Josephine A. Loucks; a niece, Mrs. Julia Loucks Lake, Greensboro, N. C.; a nephew, Burton Loucks, Fairview, N. J.

Herman G. Weber

Herman G. Weber, 65, inventor of international repute whose machines are in use throughout the United States and in many foreign countries, died at his home, 434 Bell avenue, Sheboygan, Wis., on October 25.

While it was known that Mr. Weber had been seriously ill for some time, the news of his death came as a shock to his large circle of friends. He was widely acquainted in Sheboygan, and at Kiel, Wis., where he was president of H. G. Weber & Co., Inc., manufacturers of paper bag and paper converting machinery.

Mr. Weber had the distinction of being the inventor of the largest paper bag manufacturing machine in the world, and besides those in use in the industry throughout the United States, his machines at present are in South America, Africa, Sweden, Mexico, England and Canada.

Herman Gustav Weber was born on March 11, 1878, in Hanover, Germany, the son of Wilhelm and Anna Weber.

The son of a German machine builder, he showed similar ability at an early age, and he attended the Hanover Institute of Technology. As a youth of but 17 years, he patented his first invention. After serving one year in the German army, he came to America in 1899.

In the fall of 1936 Mr. Weber established his own plant at Kiel where the company has continued doing similar work. Since national defense and the war, the company has been operating on vital war equipment.

The marriage of Mr. Weber and Miss Lucy Franke occurred at Jersey City, N. J., on September 30, 1902.

Survivors include Mrs. Weber, two daughters, Mrs. Anita Ludwig of St. Paul, Minn., and Mrs. John Walter of Sheboygan; one son, Herbert Weber of Sheboygan; six grandchildren; one sister, Mrs. Erna Loibl of New York City. Because of the serious condition of Mr. Weber recently, Mrs. Loibl arrived here two weeks ago and Mrs. Ludwig has been here since Saturday.

Funeral services were held at the Ballharn Temple Chapels and burial was in Wildwood Cemetery.

Raymond B. Livermore

Raymond B. Livermore, for many years connected with the paper industry, died at his home in Schuylerville, N. Y., October 18, in his 66th year.

Mr. Livermore was well known to the paper trade in the Eastern states. He was born in Ft. Miller, N. Y., and as a boy started his career of paper making at the Ft. Miller Pulp and Paper Company. At different times he was employed by the American Wood Board Company of Clarks Mills, N. Y.; J. J. Rogers Paper Company, Ausable Forks, N. Y.; Beaverbrook Paper Company, Danbury, Conn.; The Hollingsworth and Vose Paper Company., West Groton,, Mass., and the Bayliss Paper Company, Austin, Penna. For the past eleven years he was general manager of the Tarentum Paper Mill at Tarentum, Penna. He was a 32nd degree Mason.

Besides his widow, he is survived by one son, Donald Livermore, at Tarentum, Penna.

H. Y. Rehrer

Hal Y. Rehrer, 56 years old, vice-president of the Fisher Brothers Paper Company, Fort Wayne, Ind., died recently in a hospital there fifteen minutes after an accident in which he lost control of his automobile. It was believed probable that he suffered a heart attack just prior to the accident. His car crashed into a parked car. Police traffic officials reported that several witnesses said Rehrer was operating his car in a normal way at reasonable speed just prior to the collision.

A resident of Fort Wayne most of his life, he had been associated with the paper company 30 years. He was a native of Toledo, Ohio. He was a member of the Fort Wayne Scottish Rite, Shrine, Elks lodge and Chamber of Commerce. The widow and two sons, one in the armed forces, survive.

T. M. Johnston

Announcement is made at Troy, N. Y., that Thomas M. Johnston, 66 years old, former superintendent of mills for the John A. Manning Paper Company, died last week at Manchester, Conn., following a long illness. After he left Troy in 1920 he went to Manchester to take the position as superintendent of the Rogers Paper Company, which position he held for many years. He entered the employ of the Manning Paper Company in June, 1912, being employed at the concern's mill in River street. In 1915 he was made superintendent of the branch mill at Green Island and in 1916 he became manager of the branch at Mount Ida. The principal survivors are his widow, a son and two daughters.

TO CONTROL WOOD PULP

(Continued from page 7)

for more pulpwood. They are all having their effect, but we don't know whether or not they will do the whole job."

Principal bottleneck to greater farmer participation in the program is the red tape which a deferred agricultural worker must plough through in order to get draft board absolution for cutting pulpwood, Mr. Hansen pointed out, adding that he was attempting to remedy the situation.

He indicated that additional woods workers would be obtained by "importing" Canadian, Mexican and West Indies labor.

Predicts Continued Wood Shortage

George Mead, president of the American Paper and Pulp Association, predicted that the shortage of pulpwood will not end with the termination of the war, but will be extended for at least a year afterward.

George Wallace, president of the Fitchburg Paper Company, Fitchburg, Mass., and president of the Association of Pulp Consumers, presided at the meeting.

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending November 6, 1943

STOCKS

	High	Low	Last
A. P. W.	2½	2⅜	2⅜
Armstrong Cork Co.	37¼	35¾	36½
Celotex Corp.	12⅜	11¼	11¼
Celotex Corp., pf.	18⅛	18	18
Certain-Teed Products Corp.	5¾	5	5⅜
Certain-Teed Products Corp., pf.	67¾	62½	64¼
Champion Paper & Fibre Co.	20¾	19¾	19¾
Champion Paper & Fibre Co., pf.	107½	107	107½
Congoleum Nairn Co.	22⅝	22	22
Container Corp. of America	22	19⅞	20⅛
Continental-Diamond Fibre Co.	12	11⅜	11⅜
Crown Zellerbach Co.	16⅞	15⅝	15⅝
Crown Zellerbach Co., pf.	99	98¼	98¼
Dixie Cup Co.	14¼	14	14
Dixie Cup Co.—A	43½	42¾	42¾
Flintkote Co.	20¾	20	20
Flintkote Co., pf.	107½	107½	107½
Robert Gair	3	2¾	2¾
Robert Gair, pf.	13¼	12½	13
International Paper Co.	13⅞	12⅝	12¾
International Paper Co., pf.	68⅜	65⅜	65½
Johns-Manville Corp.	90	86½	86⅜
Johns-Manville Corp., pf.	129½	129½	129½
Kimberly-Clark Corp.	32	31¼	31¼
MacAndrews & Forbes	25¾	25⅛	25¾
MacAndrews & Forbes, pf.	....	....	....
Masonite Corp.	37⅜	36¼	36¼
Mead Corp.	8¼	8	8
Mead Corp., pf. A—6%	83	83	83
Mead Corp., pf. B—5½%	73¼	72	72
National Container Corp.	12⅜	11¾	11⅞
Paraffine Companies, Inc.	45	42½	45
Paraffine Companies, Inc., pf.	....	....	....
Rayonier, Inc.	13⅜	12½	12½
Rayonier, Inc., pf.	31⅞	31	31⅞
Ruberoid Co.	25⅝	25¼	25½
Scott Paper Co.	38¾	38	38¾
Scott Paper Co., pf.	109¾	109¼	109¾
Sutherland Paper Co.	29	28½	28½
Union Bag & Paper Corp.	10⅝	9⅜	9½
United Paperboard Co.	4¼	4	4
U. S. Gypsum Co.	72¾	70¾	71½
U. S. Gypsum Co., pf.	177½	177½	177½
West Virginia Pulp & Paper Co.	16¾	15½	15¾
West Virginia Pulp & Paper Co., pf.	106	106	106

BONDS

Abitibi Pulp & Paper Co., 5s '53	66½	66½	66½
Celotex Corp. 3¾s '55	101¼	100¾	100⅞
Certain-Teed Products Corp. 5½s '48	101¾	100⅞	101
Champion Paper & Fibre Co. 4¾s '50	....	....	....
International Paper Co. 6s '55	106¼	105½	106¼
International Paper Co. 5s '47	104¼	104	104
Mead Corp. 3½s '53	....	....	....
West Virginia Pulp & Paper Co. 3s '54	103⅝	103½	103⅝

New York Curb Exchange

High, Low and Last for Week Ending November 6, 1943

STOCKS

	High	Low	Last
American Box Board Co.	7⅝	7⅜	7⅜
Brown Co., pf.	....	....	....
Great Northern Paper Co.	32	30	31½
Hummel-Ross Fibre Corp.	4⅛	4	4
St. Regis Paper Co.	3½	3	3
St. Regis Paper Co., pf.	137	137	137
Taggart Corp.	4¼	4	4

BONDS

American Writing Paper Co. 6s '61	....	....	....

A. P. W. May Sell Harbour Mill

Dwight G. W. Hollister, president of the A. P. W. Paper Company, Albany, N. Y., has informed security holders that the management is negotiating for the sale to Canadian interests of the Halifax Power and Pulp Company, Ltd., of Sheet Harbour, N. S., in which the company has a substantial interest "which has yielded little return."

An option has been given with respect to the Halifax company which, if exercised, will give the A. P. W. Paper Company, among other considerations, $613,100 in first mortgage sinking fund 4½ per cent bonds of the Halifax company, or $582,445 in cash if the bonds be sold at 95 per cent.

The amount of Albany Perforated Wrapping Paper bonds now outstanding has been reduced to $1,975,000, including those in the treasury, through purchases and through the sinking fund. A total of $3,000,000 was originally outstanding. While certain treasury bonds may be used in connection with clearing the Canadian property of a small first mortgage, it is anticipated that all first mortgage debt of the A. P. W. Paper Company can be reduced to at least $2,000,000 if a refunding can be effected.

Mr. Hollister said that if the option for the Halifax company is exercised it is hoped that the bonds or cash realized therefrom can be utilized in connection with the possible refunding of the present first mortgage 6 per cent bonds due 1948 at a lower rate of interest and a materially extended maturity, although there is a possibility that a preferred stock issue might be substituted.

"Having in mind these possibilities, and to facilitate an ultimate refunding, the company recently has accelerated the purchase of its first mortgage 6 per cent bonds for the reason that all the outstanding bonds, if the possible refunding takes place before maturity, must be called at 102½ and interest," he said.

"The board of directors, as does the president of the company, desires it to be known that the president in his personal capacity has secured an option expiring November 15, 1943, although it may be extended, on substantial proportions of certain securities of the A. P. W. Paper Company, Inc. The company itself is not a party to said option."

Hummel-Ross Profits Off

The Hummel-Ross Fibre Corporation for the thirty-six weeks ended September 30, reports a net income of $224,449 after taxes and charges, equal after preferred dividends to 50 cents a share on 396,706 common shares; year ago $312,772.

Paper & Type Co. Nets $3.54

The National Paper and Type Company for the fiscal year ended August 31, reports a net income of $265,518, or $3.54 a common share; for previous year, net income $367,583, or $5.13 a share.

Lily-Tulip Co. Earns $703,640

The Lily-Tulip Cup Corporation and subsidiaries for the year ended September 30, reports a net income of $703,640, after taxes and charges.

Dixie Cup Co. Earns $1.99

The Dixie Cup Company for the year to September 30, reports a net profit of $849,924, or $1.99 a common share, against $871,770 or $2.10 a common share for twelve months to September 30, 1942.

Union Bag Nets $670,753

The Union Bag and Paper Corporation reports for nine months as follows: Net income, $670,753, or 53 cents a share, compared with $1,375,234, or $1.09 a share, last year; sales, $24,021,335, increased 16.1 per cent over $20,697,808 volume last year. September quarter: Net income, $406,464, or 32 cents a

share, against $332,594, or 26 cents a share in third quarter of 1942; sales, $8,538,491, rose 77.5 per cent over those of $4,809,395 for similar quarter a year ago.

Continental-Diamond Nets $1,354,000

The Continental-Diamond Fibre Company and wholly-owned domestic subsidiaries report for nine months as follows: Net income, after $1,354,000 taxes and $235,000 contingency reserve, was $329.007, compared with $361,153 net income after $810,500 taxes and $75,000 contingencies last year.

International Nets $2,279,273

Richard J. Cullen, chairman of the corporation in submitting the statement of the consolidated profit and loss of International Paper Company and subsidiaries for the quarter and nine months ended September 30, 1943, together with statement for the corresponding periods of 1942 as originally reported, states:

"Net profit for the third quarter and first nine months of 1943 amount to $2,279,273 and $6,622,474 respectively. These figures do not include net profits of foreign subsidiaries (amounting to $522,724 for the quarter and $728,690 for the nine months) which are transferred to reserves in accordance with policy adopted at close of 1942.

"The attached figures do not reflect any adjustment on account of renegotiation of 1942 and 1943 war contract business as the effect of such renegotiation cannot yet be determined.

"The directors of International Paper Company today declared the regular dividend of $1.25 a share on the Cumulative Convertible 5% Preferred Stock for the fourth quarter of 1943. This dividend is payable December 7, 1943 to holders of record November 23, 1943. Declaration was made at an earlier meeting than usual in order to permit payment of the dividend prior to December 15 when individuals must file their final declarations of estimated income tax for the calendar year 1943."

The statement of consolidated profit and loss follows:

Flintkote Reports $1,362,205

The Flintkote Company and subsidiaries for forty weeks to October 9 report as follows: Net income, after $1,362,205 taxes and $150,000 contingency reserve, was $1,024,080, equal, after preferred dividend requirements, to $1.04 each on 713,706 common shares. This compares with $1,115,906 or $1.37 a common share after $3,078,878 taxes, for 1942 period. Twelve weeks to October 9: Net income, $444,151, against $424,575 net income for similar period last year. Fifty-two weeks to October 9: Net income, $1,635,328, against $1,463,532 for 52 weeks ended October 10, 1942.

STATEMENT OF CONSOLIDATED PROFIT AND LOSS OF INTERNATIONAL PAPER CO.

	Three Months Ended September 30, 1943	Three Months Ended September 30, 1942	Nine Months Ended September 30, 1943	Nine Months Ended September 30, 1942
SALES AND OTHER INCOME:				
Gross sales, less returns, allowances and discounts	$54,618,446.21	$44,821,197.61	$158,780,385.01	$160,051,442.62
Other income—net	1,095,360.32	1,067,166.45	3,237,211.91	3,189,244.18
	$55,713,806.53	$45,888,364.06	$162,017,596.92	$163,240,686.80
COST AND EXPENSES:				
Cost of sales:				
Pulpwood, labor, materials, etc.	$32,514,611.04	$25,857,007.42	$ 95,785,242.05	$ 86,157,024.32
Maintenance and repairs	2,781,327.34	3,162,018.84	8,032,247.27	9,495,273.07
Taxes (other than income taxes)	907,753.79	1,018,937.11	2,748,079.94	3,028,942.99
Outward freight and delivery expenses	5,368,635.37	5,467,083.34	16,353,436.88	18,228,603.94
Selling, general and administrative expenses	1,677,986.92	1,725,352.69	4,935,075.04	5,374,134.71
Provision for doubtful accounts	29,870.65	179,857.39	89,394.65	539,495.96
	43,280,185.11	37,410,256.79	127,953,475.83	122,823,474.99
	$12,433,621.42	$ 8,478,107.27	$ 34,064,121.09	$ 40,417,211.81
DEDUCTIONS:				
Interest on funded debt	$ 635,824.41	$ 663,836.29	$ 1,932,543.25	$ 2,049,556.06
Interest on other debt	5,530.20	13,994.62	10,708.01	20,068.65
Amortization of debt discount and expense	55,439.73	71,717.43	166,395.60	198,891.38
Depreciation and obsolescence	2,947,969.01	3,382,833.42	8,730,224.37	9,967,678.30
Depletion	262,491.92	198,372.16	776,899.56	611,114.15
Dividend on preferred stock of subsidiary	1,712.50	1,733.75	5,137.50	5,201.25
	3,908,967.77	4,332,487.67	11,621,908.29	12,852,509.79
	$ 8,524,653.65	$ 4,145,619.60	$ 22,442,212.80	$ 27,564,702.02
Less: Provision for Taxes Based on Income:				
U. S. Federal taxes:				
Normal	$ 1,080,644.00	$ 1,047,658.00	$ 3,252,874.00	$ 3,142,690.00
Excess profits	4,695,958.00	1,672,855.00	12,315,772.00	17,361,503.00
State taxes	117,154.00	39,096.00	305,486.00	312,688.00
Canadian and other foreign taxes	300,874.93	171,913.67	456,548.93	1,285,563.88
	6,194,630.93	2,931,522.67	16,330,680.93	22,102,444.88
	$ 2,330,022.72	$ 1,214,096.93	$ 6,111,531.87	$ 5,462,257.14
ADD: Post-War Excess Profits Tax Credit:				
U. S. Federal	$ 469,597.00	$ 167,285.00	$ 1,231,578.00	$ 1,736,150.00
Canadian	2,378.45	45,663.43	8,054.96	45,663.43
	471,975.45	212,948.43	1,239,632.96	1,781,813.43
	$ 2,801,998.17	$ 1,427,045.36	$ 7,351,164.83	$ 7,244,070.57
Less: Net Profit of foreign subsidiaries transferred to Reserves	522,724.43	—	728,689.93	—
NET PROFIT	$ 2,279,273.74	$ 1,427,045.36	$ 6,622,474.90	$ 7,244,070.57

The above figures are subject to any change in income and excess profits tax rates and to the effect of possible renegotiation of contracts.

Figures for the nine months ended September 30, 1942 after giving effect to adjustments applicable to the first six months as follows:

(a) Excess provision for taxes based on income	$ 808,178
Plus: Post-war excess profits tax credit	1,568,865
Total excess tax provision	$2,377,043
(b) Additional provision for obsolescence	*1,200,000*
Net increase first six months	$1,177,043

The above statements are subject to audit and final adjustment at December 31 (end of fiscal year).

November 11, 1943

PAPER TRADE JOURNAL

Pats. Reg. U. S. Pat. Off.

Henry J. Berger

EDITOR

Vol. 117 November 11, 1943 No. 20

COMING EVENTS IN PAPER INDUSTRY

New England Section. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

Delaware Valley Section. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

Lake States Section. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

Kalamazoo Valley Section. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

PRICE STABILITY

When Bernard M. Baruch appeared before Congress he advocated what his report on controlling inflation recommended—compete regulation of all major factors of an inflationary nature. That meant control by the government of everything used, earned, bought and purchased. It necessarily included farm products and wages. But agriculture had sufficient influence to prevent the inclusion of farm products in the price regulation act adopted, and organized labor had sufficient influence to keep wages out of it. The legislative debate at the time was largely of commodities and Mrs. Roosevelt declared wages was not a commodity. That statement was not particularly important in the consideration of ways and means to prevent inflation. Commodities are factors and while wages are not commodities, wages are a major factor in the economy of the nation and a highly significant factor in any inflationary trend or plan to check prices from spiraling upward.

The Administration's program to control inflation thus was incomplete at the start and most of the difficulty which the Office of Price Administration has encountered in its efforts to keep prices down and stabilized, has been caused by lack of control over farm prices and wages. Canada has, in contrast, had little if any difficulty in controlling inflation. That is attributed to the inclusion of wages and farm prices in their wartime economy. There is little doubt that America would have been more successful if the Administration and Congress had included instead of rejected these two essential factors in completing its war economy set-up

The failure of the OPA to achieve better results than it has attained, is apparently based in part upon a psychosis of fear, of grave apprehension of inflation getting out of control of the Administration. This was indicated at an early period in the discussion of a wartime economy. When the faulty program was enacted into law, the OPA made the fundamental and serious error of adopting too low base prices for almost everything. When basic values were fixed, it was explained at many meetings called by the OPA with manufacturers and merchants, that price levels would be adjusted wherever and whenever there was need to place them upon an equitable footing. Unfortunately, this has not often enough been done and the rising cost factor (due to lack of regulation of wages) has created a complexity that no one has attempted to solve. The regulations enforced by the OPA have been, in many instances, unnecessarily severe and have been unduly burdensome upon many industries and upon almost all merchants. Why this has been so it is difficult to understand, for such avoidable handicaps upon business activities must hamper rather than expedite the war effort.

The present highly confused status of the nation's war economy is potentially inflationary to an undesirable degree. According to statistics on the cost of living as presented by former Price Administrator Prentiss Brown, the net income of farmers has increased 90%, the average weekly wages of labor has risen 33%, corporate profits, after taxes, 15% and prices in general have advanced 12%, since December, 1941. Some government officials assert there is apparently little hope of stabilizing prices at the current level but that higher prices seem inevitable. Even the advocates of government subsidies to roll back prices apparently have little faith in that remedy. An increasing "black market" in many essential commodities and in luxuries is viewed as an unfavorable sign. The wage dispute, involving the "hold the line" order of the President, and the "Little Steel" formula are also indications that something is economically wrong. With the coal strike temporarily settled through the simple but unsound expedient of granting a substantial wage increase, the steel workers and the railroad workers have an equally just cause for asking higher wages. Then, why cannot agriculture also call for more pay for its essential products? It seems clear that prices are about to head up more sharply unless the pressure of groups asking for wage increases can be successfully resisted.

In view of the unrealistic and unsound wage policy as disclosed by acts of the Administration's agency, the WLB, it looks as if the "hold the line" order is inconsistent with the Administration's policy as a whole; that the "line" has been cracked by the coal miners and that demands of other groups threaten to split the "line" wide open. It is interesting to read contrasting opinion among members of the War Labor Board. In commenting on the new contract for the coal industry Chairman Davis stated that, "It will be within the limits of the national wage stabilization policy, because increased daily earnings will

then all be in payment for increased production of coal." Wayne L. Morse, the dissenting member, said the contract was "the product of the use of economic action **against the government** and the nation and, therefore, should be disapproved as against sound policy."

Definitely a new labor policy to provide control over wages and some effective regulation for preventing the continued rise of food prices is urgently required to keep inflation under control. Subsidies can scarcely help much, for this is a minor method of correcting a potentially dangerous situation. In principle, the adoption of a subsidy is in itself an admission that prices to be supported are out of line and too low. In effect, the expenditure for such purpose is a weak staff to depend upon and will cost more than any saving effected in this impractical attempt to roll back prices below an equitable level.

Packaging Institute Meets

With raw material shortages and new governmental restrictions of increasing concern, the Packaging Institute held its Annual Meeting at the Hotel New Yorker, New York, N. Y., November 4-5, 1943 at which these problems were discussed. It was the largest meeting to date, some 500 representatives of firms interested in the varied aspects of packaging being present.

Mr. Joel Y. Lund, President of the Institute, set the tenor of the meeting in his introductory remarks by describing the present situation which was further amplified in the meetings of the production, machinery, and supplies divisions.

The pulp and paper supply was the major concern since paper products were substituted for the more critical materials over the past years and no substitute for paper is apparent. In addition to the paper package itself, the difficulty of obtaining paper shipping containers imposes a distribution problem upon those packages which are available. Reuse of shipping boxes was proposed but it was recognized that such procedure would be but a partial answer. Consequently, strict conservation was urged since there is no indication of an immediate easement of the situation.

A glass packing manual, sponsored by the Institute, should be available at the first of the year but the manual of standards and methods of packaging testing which is under the direction of Mr. C. A. Southwick, is only in the formative stage. According to the outline, it will include such tests on paper products which are essential to the packaging industry.

Gilbert Paper Co. Sold

Purchase of the Gilbert Paper Company, Inc., wrapping paper distributors, 175 Wooster street, New York, by Samuel A. Gersten, who has been associated with the company in a sales managerial capacity for several years, was announced last week by the company. W. Norman Frenkel, who founded the company in 1899, is retiring from active business, it was stated ,and the organization will continue to operate with the same personnel as heretofore, with Mr. Gersten as its head.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1943		Corresponding Weeks—1942	
September 25	92.1	September 26	87.2
October 2	92.7	October 3	87.8
October 9	91.0	October 10	88.0
October 16	90.5	October 17	89.8
October 23	88.5	October 24	91.6
October 30	89.5	October 31	92.9

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1942	104.5	103.9	102.9	100.4	95.3	87.4	75.8
1943	87.2	88.9	89.5	88.7	91.4	86.5	84.4

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1942	80.8	82.8	90.6	86.9	80.1	90.4
1943	91.1	88.3	90.2	....	....	....

COMPARATIVE YEARLY SUMMARIES

	1936	1937	1938	1939	1940	1941	1942	1943
Year to Date	79.2	84.7	70.7	81.3	86.1	96.2	92.0	88.6
Year Average	80.4	79.8	71.5	83.4	85.6	97.4	90.4	....

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1937	83	89	89	91	88	80	69	77	72	70	57	47	75
1938	56	63	63	60	60	59	59	60	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	..	..	..

Week ending Sept. 25, 1943—96
Week ending Oct. 2, 1943—97
Week ending Oct. 9, 1943—94
Week ending Oct. 16, 1943—95
Week ending Oct. 23, 1943—94
Week ending Oct. 30, 1943—94

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

Predicts Greater Forest Industries

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 8, 1943—W. Garfield Weston, Canadian industrialist and British M. P., who recently purchased the E. B. Eddy Company, of Hull, P. Q., and the J. R. Booth Company, another great forest industry with headquarters in Ottawa, has given out a statement expressing the belief that a new and more active era is at hand for the forest industries of Canada, involving higher employment and expanded foreign trade.

"The Dominion of Canada," said Mr. Weston in a statement made public today by the Canadian Forestry Association, "is founded largely upon an economy of wood. Our country holds the only considerable stands of coniferous timbers in the British Empire, an asset of great importance in future world trade. When we point confidently to the future of forest industry, we must be prepared to give the raw materials of the forest the strictest possible regime of fire prevention and constructive management. If the forest resources deteriorate forest industry must follow the same path. More than that, if we destroy our more accessible forests, we automatically force upward the costs of raw material transportation, and handicap our competition in world markets.

"It appears to me that Canada's advantages in a rich forest heritage should be paralleled by a determined effort to banish the ravages of forest fires. That is a first and obvious necessity. With fires controlled, we must operate all timberlands to produce their fullest harvest of wood materials without any diminution for all time to come. The rational management of our forests challenges the foresight and shrewdness of our governments, our industries and not least, the man-on-the-street."

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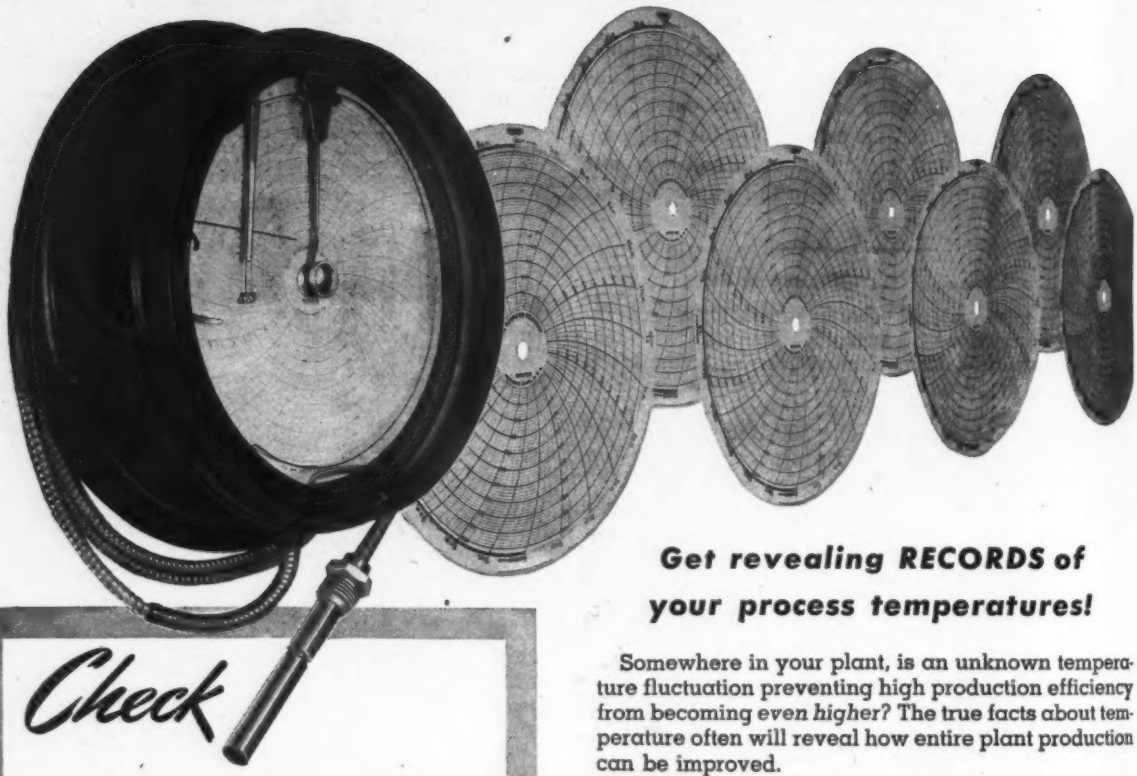

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Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
122 E. 42nd St., New York 17, N. Y.
Edited by R. G. Macdonald, Secretary

Packaging Medical Supplies for the Army*

By James D. Studley[1]

Abstract

The paper products purchased for the Medical Department are utilized to pack battle dressings, medicine, and hospital equipment. The packaging requirements of paper and paper board are given to indicate the necessity for stringent specifications.

The Army's medical package is not primarily designed for merchandising purposes as is the antiseptic, the cathartic or the first-aid package where that article is manufactured for direct consumer use. Eye appeal of the Army's medical package is, in fact, hardly secondary in importance. Protection, accessibility and dispensability are the major factors always in the mind of the medical-package designer.

The waterproof bag liner is an excellent example of package protection; protection of the medical product against water. Not only must this liner protect the medical product against tropical rains, melting snows, fog, and even salt water immersion but it must do this in spite of the rubbing and abrasion which always goes with shipment. Field items, such as the individual soldier's first-aid battle dressing or sulfadiazine tablets which are taken against infection immediately on being wounded, must likewise be packaged for protection against water and contamination. The plaster of paris bandage is useless unless so packaged as to be protected against water; likewise x-ray films must be given almost perfect protection against moisture, particularly when shipped to the humid tropics. In the field of packing too, examples are almost limitless. Sterilizers, x-ray equipment, surgical instruments, and numerous other items susceptible to corrosion must be given packing protection and of course protection against breakage. Vials, ampules, and bottles must be packed against breakage. In all of this, in both packaging and packing for protection, paper and paperboard play an important part.

First-Aid Packs

The first-aid packet or battle dressing is essentially a dressing for self application by the soldier when wounded and is carried in his web belt. Obviously, it must go through all kinds of weather with him, perhaps through the salt water of an amphibious landing or the flood water of a tropical storm. To be of use it must always be dry and clean. A year ago it was kept dry by over-packaging in a tin, lipped box which was opened by peeling off the sealing strip around the lips. When tin became critical the Army developed a plastic container of practically the same shape as the tin one. This latter did not prove satisfactory, however, because of distortion with consequent leakage at the point of closure, so the Medical Department turned to paper. The present pack was developed It is a compact watertight, gas-tight package and uses the less-critical materials. An automobile has actually been known to have run over it without damage to the dressing. Best of all, the dressing is quickly accessible to the user. As the wounded soldier removes the packaged dressing from his belt he can easily slip it from its two paperboard sleeves and tear off (perhaps with his teeth) the water-tight envelope. The paper wrapping over the bandage itself is likewise easily removed and the dry, clean, compressed dressing becomes available. These dressings are now made brown in color so as not to be so easily seen by the enemy sniper.

The wrap immediately surrounding the dressing is of 100% sulphite imitation parchment; of 45-pound basic weight and with a burst strength of 35. The laminated bag immediately surrounding this wrap is made of a 30-pound sheet of dense northern kraft on the outside laminated with an asphaltic compound (minimum melting point 175° F.) to a layer of lead foil 0.001-inch in thickness. The foil is thermoplastically laminated to a cellulose base sheet of 0.009-inch minimum thickness, coated with a thermo-sealing compound to permit the envelope to be heat-sealed. The weight of the laminated sheet is required to be not less than 225 pounds and the bursting strength not less than 40 pounds. A coating of parraffin is placed on the kraft sheet of the envelope to repel water when the package is dunked or wet. The sleeves are of 25 point, dense, wax impregnated, kraft board, the overlaps being securely held with a waterproof adhesive. The whole gives a package of high utility under the worst conditions of moisture-vapor, water and rough usage. It should be stated that the two sleeves on the outside of the package are required to take a load of 80 pounds for 3 minutes without collapse with dressing removed and that the bag package is required to take a load of 175 pounds on the seamless faces for 5 minutes, likewise without collapse. Under this severe load there must be no visible damage and the waterproofing features shall not be impaired. These are stringent requirements.

An item similarly packaged and likewise carried by the individual soldier in the belt is the sulfadiazine

* Presented at the Army and Navy Requirements Conference of the Technical Association of the Pulp and Paper Industry, Palmer House, Chicago, Ill., Sept. 21-24, 1943.

[1] Chief, Packing Section, Distribution and Requirements Division, Office of The Surgeon General, U. S. Army, Washington, D. C.

tablet, there being eight of these packaged together. They are the tablets which the soldier is instructed to swallow if wounded and it is vital that they be kept dry, clean and readily accessible. Like the battle dressing too, they must be packaged against rough treatment. The outer envelope of the sulfadiazine package is of the kraft-laminated-to-foil type with a layer of regenerated cellulose coated with a thermoplastic which permits heat sealings. Still other items packaged in the kraft-laminated-to-foil wrap are the benzedrine sulphate tablets, carried by the soldier and taken to prevent sleepiness, the plaster of paris bandage and the x-ray films above mentioned. For all of these items, this type of package has proven very satisfactory. The thickness of foil and weight of sheet vary somewhat among the items but the basic materials and packaging methods used are almost identical.

Equipment Packaging

One other class of items which are packaged in the foil-laminated-to kraft exterior wrap are the metal bushings, nipples, needle-valve and other replacement parts so important to the maintenance of the overseas hospital sterilizer. When needed, these parts are needed badly. They must not be corroded. They must be well packaged. Each part is thoroughly cleaned and preserved therefore in conformity with the provisions of Army Specification 100-14A, Method I, following which it is tightly wrapped in a Grade C, Type I or Type II paper as detailed in Ordnance Specification AXS-840. A minimum of three layers of the paper is used about the part. Following this tight wrapping the part is placed in an identifying kraft envelope. A set of the various parts so packaged are placed together in an overall foil-laminated-to-kraft envelope which is heat sealed with a minimum of entrapped air. The whole is then dropped into a cloth bag of coated fabric which is tied to the sterilizer when shipment is made. A more orthodox method, doubtless, would be to dip the paper wrapped items in XX wax but because so many of them are small and difficult to handle, the foil barrier method is used instead.

It will be recognized that all of the packages so far mentioned are of the specialty type. Each has been developed to meet some moisture-vapor of free-water barrier requirement. The great bulk of medical supply items packaged (the tablets, the ointments, the tinctures, the bandages and the adhesive plasters) are not packaged so much as they are packed and the problems are chiefly supply problems. If they are packaged at all it is usually in an orthodox folding or set-up box with no packaging problem present and certainly no paper problem is involved.

Packing Medicine and Hospital Supplies

With drugs, pharmaceuticals and biologicals which include the oils, fluids, tinctures, elixirs, spirits, acids, alcohols, etc.; likewise the ointments, crystals, powders and pastes and the vaccines, antitoxins and stains, a standard packing method has been adopted. The item —whether in glass bottles, tubes, or fiber cans, is packed in a corrugated-board box of 200 to 275-pound test, over-packed in a watertight bag liner and dropped into a wooden box, of approved design. In such a pack a nonwater-soluble, adhesive for label application is specified. One adhesive has been found which meets this requirement and which can be used on labelling machines and on vials and ampules as well as on bottles with fair success. There is room for improvement, however, as regards this adhesive situation. There is certainly room for the development of more and better bag liners, particularly if it might be possible to produce a high-test liner without the use of kraft fibers. But again, this leads back largely to a supply problem.

The Medical Department has given considerable thought to the use of the plastic bottle and has already specified it for use in certain of the field kits. Generally speaking, the plastic bottle will carry the same contents as will the glass bottle at a 20% saving in cubeage and a 75% saving in weight. Only certain items can be bottled in plastics without undesired reactions but to some extent these reactions can be obviated by the use of another plastic. Certainly the plastic bottle would seem to have possibilities wherever weight is to be saved. They will not break at ordinary temperatures and require little or no packing, or protection against breakage. It is possible too that they will hold the plastic cap better against loosening than does the glass bottle.

The class 2 items, gauzes, bandages, absorbent cotton and adhesive plasters, are cartoned and packed inside a V board box with waterproof bag liner. Again, a larger supply of effective bag liners is desired. A package of cotton or of gauze is absolutely worthless if wet or contaminated with water and it is vital that the bag liner be effective. Too many suppliers have attempted to put out a price item. It must first do the job and really do it.

Surgical instruments have given almost no trouble to date. The non-standardized wrappings in which they are now received and in which they are shipped are doing a good job against corrosion. However Grade C, Type III paper which is greaseproof, acid-free, non-corrosive and sealable, is being considered. Any suggestions which might give perfection in surgical instument packaging are solicited.

Other Uses

The possible uses of paper products by the Medical Department for other than packaging purposes may be of interest. One product in which the Department is interested is the blanket substitute. The idea of such a substitute is not a new one. As a matter of fact numerous tests have already been made on some six or seven samples. At least two of these hold real possibilities. Possibly some of the others have been improved since tested. Obviously, the paper blanket must successfully meet rather rigid requirements. It must have good tearing strength, a high flexibility and crumpling value, softness, waterproofness, insulation value and lightness in weight. It must be of reasonable cost. If it can be made of the relatively more plentiful waste fibers, such will be in its favor. The substitute blanket certainly has possibilities.

Another product in which the Medical Department is and has for sometime been interested in plasticized hospital (fiber base) sheeting. This would be used as a substitute for the regular sheeting. To date, however, none of those tested have shown sufficient durability and tensile strength under actual use. The best ones among those tested had a life of but 2 to 3 hours. In addition to durability, tensile strength and reasonable life this substitute for sheeting must be soft to the patient, somewhat absorbent and possess other rather evident characteristics.

Doubtless there are other ways in which the paper products can serve the Medical Department in this war.

Packaging Materials Required for Preservation*

Army-Navy Aeronautical Specifications

By Lt. (jg) D. R. Weedon, Jr. USNR[1]

Abstract

The Army and Navy aeronautical specifications relating to paper products were developed by the coordinated efforts of both services and pertain to packaging materials as they are related to the preservation of metal parts and equipment. The procedures of packing, the more important specifications, and proposed modifications are discussed. The procedure for obtaining the qualification listing required by certain specifications is also outlined.

The need for the preservation of metal parts and equipment is no longer questioned. Reports of corroded materials arriving at the battle fronts have convinced both industry and the government that exacting preservation ranks with design and production in importance. There is no similarity between conditions now and those existing prior to the war. Advance bases have little, if any, provision for storage; each package must be its own warehouse. Shipping and handling facilities are far from perfect and because of a changing scene of action, climatic conditions are unpredictable.

The Navy has assigned the general project of preservation of metal parts and equipment to the NAES, Philadelphia, Pa. Under this project only preservation procedures and materials are investigated, and packaging materials are included only in so far as they relate strictly to preservation. All of the materials and procedures are covered in Army and Navy aeronautical specifications which are coordinated and jointly approved by the Army Air Forces and the Navy Bureau of Aeronautics.

Packaging Procedure

Two procedures of preservation in connection with packaging used in aeronautics are covered in Army-Navy aeronautical specification AN-P-13, and have been identified as Method I and Method II. Method I consists of properly cleaning the part to be preserved then applying an approved corrosion preventive compound, and wrapping in a greaseproof paper. Preservation by this method depends upon the maintenance of the film of corrosion preventive compound, whereas Method II requires cleaning the part and sealing it in a moisture-proof barrier with an included dehydrating agent. In this method, preservation is accomplished by maintaining the relative humidity below 30% within the container. It has been established that corrosion will not occur at relative humidities under 30%, consequently it is only necessary to renew the included dehydrating agent when the color of the humidity indicator inside the container shows that the humidity is above this value. Continuous inspection and represervation is necessary and it is not feasible to overdo the use of the procedure. Method II should be used only where preservation with corrosion preventive compounds is undesirable due to the nature of the part. Materials packed under this method should be ready for use immediately upon arrival at destination and generally, it is used only for assembled equipment where degreasing would be impossible or require complete disassembly. These methods are temporary procedures to preserve metal equipment and it is not known how long each is effective. There are many variables in each method and it is not possible to assume that one variable is more important than another, but it is obvious that the conditions of temperature, humidity, submersion and cycling are all of major importance in determining the time for which a preservation procedure will be effective. In the case of Method I, additional variables exist in the cleaning and application of the corrosion preventive compound as well as the protection offered by the particular compound itself. In the case of Method II, either the use of a container with a considerably lower water vapor transmission rate than that required, or the use of a dehydrating agent with a greater absorption than that required, will lengthen the preservation life. The formula for the amount of dehydrating agent as stated in AN-P-13 is based solely on the experience at the Army and Navy aeronautical services with Method II at the time that this specification was written, and it is subject to any changes made necessary by additional experience. A frequent statement is that the amount of dehydrating agent, as computed by using the formula in AN-P-13, will preserve for six months when Method II is properly applied. This cannot be true, since a Method II preservation job can last anywhere from a few weeks to a few years, depending upon the variables just discussed.

Qualification Tests

In dealing with Army-Navy specifications, apparently the least understood item is that of qualification of materials under the various Army-Navy specifications which provide for qualification tests. The purpose of qualification is not to substitute for inspection tests, but to establish a list of approved products where there are tests in the specification which could not be conducted as inspection tests because of the complexity, the equipment involved, or the time necessary. In order to qualify under an Army-Navy specification, it is necessary for the manufacturer to write to the testing agency as stated in the particular specification and request authorization to submit a sample. When a qualification list is originally set up, all interested manufacturers should submit their samples to the testing agency and tests will be made without a charge. After a qualification list has been established, it is published in the form of an ANA

*Presented at the Army and Navy Requirement Conference of the Technical Association of the Pulp and Paper Industry, Palmer House, Chicago, Ill., Sept. 21-24, 1943.

[1]Naval Aircraft Factory, Philadelphia, Pa.

Bulletin; if a fee is to be charged, this will be mentioned in the authorizing letter. After completion of tests, a report must be written which will recommend certain manufacturers for approval. However, prior to publication of the bulletin, it is necessary that both services approve the test results. When this approval has been obtained, the bulletin is published covering the applicable specification and is available to anyone who applies to any of the agencies supplying the specification. Manufacturers frequently become impatient while waiting for the issuance of the bulletin and begin writing or calling on the various agencies, including the testing agency. Furthermore, they might even go so far as to submit samples to another aeronautical laboratory which is not even the qualifying laboratory. Each specification provides for a particular qualifying laboratory and the system for approval of the recommendations is established. It will be appreciated that a considerable length of time is necessary for this routine. It is regretted that it is impossible to notify manufacturers as to the acceptance or rejection of the materials they have submitted prior to the issuance of the bulletin, but because all are treated alike in this respect it is expected that all will understand and cooperate.

Sometimes it is necessary for a contractor to use material covered by a specification requiring an approved list prior to the issuance of the bulletin. Furthermore, other specific problems regarding preservation as well as packaging and packing, frequently confront the contractor to the Army or Navy aeronautical services. In either case the manufacturer should prepare a letter showing what he proposes to use or what particular method he desires with test and service reports to justify his claim, and send this letter to the packaging section of the Service with whom he has a contract. In the case of the Army, the Container Section is under the Materiel Command at Wright Field, Dayton, Ohio, and in the Navy, the Packaging Section is in the Aviation Supply Office at the Naval Aviation Supply Depot in Philadelphia. Both of these sections were established to assist contractors in their preservation, packaging, and packing problems, and all such problems should be referred directly to them. These agencies, when necessary, consult other sections and both the Army and Navy packaging sections maintain very close liaison insofar as aeronautical supplies are concerned.

Specifications

The various Army and Navy aeronautical specifications which apply to preservation and packaging are listed with a brief description of each.

AN-C-52, which covers Exterior Corrosion Preventive Compound, is primarily for use with Method I. Type I compound under this specification is for relatively hard preservative films and is applied as a cold dip solvent application. Type II Grade A compound is a 120° F. melting point material, and Type II Grade B compound is a 150° F. melting point material, both of which must be applied by hot dipping. Since Type II Grade A compound does not give the protection provided by either of the other two compounds, it is not intended for use on the exterior of parts for permanent storage where a high degree of protection is necessary. The greaseproof paper specification used is AN-P-12 and covers two grades of paper, Grade A paper being red and more neutral than Grade B. paper. It is absolutely necessary that Grade A paper for this application either be colored red or contain red identifiying marks. This red marking was initially and still is intended to indicate that the manufacturer has taken extra care to produce a neutral and acid-free sheet. It also serves to distinguish this paper from other papers that may be in a packing room.

In the case of Method II, the moisture barrier is covered by specification AN-C-67. This specification is a general specification and will require additional supplemental drawings for the procurement of a container of the proper size and with gaskets when required. The dehydrating agent specification is AN-D-6 and covers five types of material. However, in general only the Type V material which is furnished in bags, ungraded by size, is used for dehydration in connection with preservation. Types I and III are graded according to size and Types II and IV are respectively the foregoing two types impregnated so that a color change is obtained with various relative humidities. There are also three sizes of humidity indicators covered in Army-Navy Drawings 7511, 7512, and 7513, the difference in these humidity indicators is merely one of size; all function in the same manner. Included in this set of specifications is AN-T-12 for moisture-resistant tape used in sealing openings as well as moisture proof containers particularly when other means are not available. Two specifications, AN-P-47 and AN-VV-C-576, which cover dehydrator plugs and an oil film type corrosion preventive compound respectively were designed primarily for engines and may also be used in connection with Method II preservation under AN-P-13.

There are also two additional specifications which were developed specifically for use in connection with preservation of aircraft engines, which is covered in AN-F-E-568. These additional specifications are AN-O-P-406 and AN-E-1 which cover respectively, transparent plastic film, and envelopes made from this film. It is to be noted that material purchased under these latter two specifications is not ordinarily to be used in connection with preservation and packaging by Method II in AN-P-13.

The only approved list which has been printed to date is the one for the AN-VV-C-576 oil-type corrosion preventive compound. Approved lists for the other preservation and packaging specifications will be published in the near future with the exception of the greaseproof paper specification AN-P-12, the tape specification AN-T-12, and the plastic film specification AN-O-P-406, none of which call for qualification testing.

Application

The importance of proper application cannot be overemphasized. The best of materials may fail occasionally to meet specifications. This necessitates inspection testing. However, even with this safeguard, unless the cleaning and application of these materials has been properly carried out, protection against corrosion cannot be expected. Such things as deciding which parts should be preserved by Method I or II and having made that decision, what compound to use in the case of Method I, or the preparation of the Drawing, and the calculation of the quantity of dehydrating agent to be used in connection with Method II, are engineering functions and must be treated as such. It is equally important to design a proper preservation procedure as it is to design the part itself; for under present conditions, improper preservation can render the part as useless as improper design. With the procedure decided upon, it

is still necessary to maintain a close check on the application of the procedures and materials. There are many cases on record of simple errors such as dipping a part at an improper temperature, improper cleaning, insufficient precaution to remove moisture from the part prior to preservation, and permitting too great a time interval between the various preservation operations. In the case of Method II there have been instances where the parts have been merely dropped in the moisture barriers with the dehydrating agent, the barriers sealed, and placed in the shipping containers. The barriers not being protected were punctured after the first handling. There are also instances where the day's dehydrating agent for a particular operator has been laid on his bench after having been removed from the can in which it is supplied. Since the dehydrating agents will pick up moisture from the atmosphere very rapidly, it is clear that the dehydrating agent that this operator uses during the day would lose its effectiveness before it was sealed in the barrier. Other simple items such as nailing labels on the sides of Method II packups with extra long nails which will puncture the barrier are obviously wrong but they are errors which are being made and must be continually guarded against. Another practice, that of opening Method II packages to make a count or material inspection, must be discontinued so as to avoid the use of excessive amounts of dehydrating agent which must be replaced each time the container is opened.

Proposed Specification Modifications

Permission has been granted to mention some of the things which are being tried at the laboratory and may be suggested by the laboratory in the near future on the subject of preservation. These ideas do not currently appear in the Army-Navy Specifications, and they may never appear in the specifications. They are merely ideas which have been worked up at the laboratory and may give an insight into the trend of things to come. In some instances, requirements and tests or test modifications have already been suggested officially for incorporation in the particular specification, and may be incorporated in the very near future; others may never be used.

In the case of the AN-P-12 Greaseproof Paper specification a corrosion test is being considered seriously; for this corrosion test, a polished 1-inch diameter metal rod, 3 inches long, is rolled in a 6-inch by 9-inch sheet of the paper to be tested. The ends are folded in and the paper is tied by means of a wire. Each paper to be tested is rolled on a polished steel, a polished copper, and a polished aluminum rod. The wrapped rods are then exposed in a cabinet at 100° F. and 95% R. H. for a period of 68 hours. If used, the requirement would be that there be no corrosion on any of three rods at the end of this period. At present a round robin on this test method is being conducted with a number of different interested laboratories cooperating. Although requirements and test methods are still in a formative stage, both a folded greaseproof requirement and an aging test are being tried.

No major revisions are contemplated on the exterior corrosion preventive compounds covered under specification AN-C-52. However, it is possible that an additional type or two may be added at some future date.

Regarding pressure sensitive tape under AN-T-12, the inclusion of an additional type of tape which will be paper backed instead of cloth back is being considered. This tape would find use particularly where the high strength of a cloth back tape would not be required. Another change which is being contemplated in this specification is a change in the method used to test the water vapor transmission. Early in this program, AN-C-67 specified the General Foods water vapor transmission test. For tape a modification of this test procedure is considered only to the extent that the tape be applied over a slot in a thin metal disc which is in turn sealed with wax in the cup normally used in container material testing. The slot which is being used is 1½ inches by 3½ inches and the tape sample is 2 inches by 4 inches. This test has been run numerous times at the Naval Air Experimental Station and has been found to be reproducible.

In connection with the plastic film specification AN-O-P-406, it is proposed to delete the type requirements which are based on thickness of the film, and instead have only two types, one of which would be a heat sealing, the other a non-heat sealing type of film, which would be sealed by special means. This is being done in an attempt to increase the possible suppliers and also encourage development by industry so that others may meet this specification. A further revision of this specification is being considered in that the water vapor transmission test be conducted in accordance with that set forth in the moisture impervious container specification AN-C-67.

In AN-C-67 itself, several changes are being considered. There is at present no material requirement, however, it is necessary that it either be transparent or contain an inspection window. It is likely that this specification soon will be revised to specify three types of containers. The first of these would be a transparent container, the second an opaque container with a window, and the third an opaque container without a window. Many suppliers have objected to the window in an opaque material on the grounds that it reduced the strength, and could not be easily fabricated. At present it appears that there is need for a moisture proof container without a window, and therefore, this type of container is being considered. However, it will still be necessary to include a humidity indicator. Possibly the use of a humidity indicator in the windowless container is not clear, but it will be appreciated that if a large shipment was received which would be drawn on from time to time, the person opening the shipment could immediately have the containers still remaining for storage opened and represerved if those drawn on indicated a need for this procedure. Therefore, the requirement for provision to be made for repeated closures will be maintained. Care should always be taken to have sufficient supplies of activated dehydrating agent on hand at all times where it may be necessary to carry out represervation. In this specification, also, a creasing test for use on flexible materials when testing for moisture vapor transmission will be specifically stated. The procedure will probably be as follows: A 6-inch square sample will be folded with 4 equidistant parallel creases placed in the square by alternating the direction of folding on each successive one so that the sheet is folded in accordion style. This stack will then be placed between 2 rigid flat plates and a weight of 36 pounds applied for 1 minute. The sheet will then be opened and the creasing under the weight process repeated, making the second series of 4 folds perpendicular to the original folds. A circular

sample will then be cut from the center of this creased square and tested for water vapor transmission in accordance with the usual procedure. A further consideration is a seam strength requirement in this specification. It will be appreciated that containers supplied under this specification are for use on metal parts and equipment which in general are heavy and frequently large. Furthermore, in most cases the opening of the container and the packing is a hand operation, since the volume of equipment of one size so packed for the aeronautical services is not large. Therefore it is felt that a seam strength requirement will be desirable. The requirement proposed today is known and is that a 1-inch sample of the seam must support a dead load of 0.5 pound for 1 hour when the test is conducted in a humidity cabinet operating at 100° F. and 95% R. H. This is the same cabinet which is required to conduct the container test under the specification at present and therefore no additional equipment is required to make this test.

New proposals are constantly being made in an effort to improve the preservation of metal parts and equipment. All manufacturers who are interested in this vital problem should present samples of their material to the Aeronautical Materials Laboratory at the Naval Air Experimental Station, Philadelphia Navy Yard, so tests can be made. The development of new materials is a continuous process and requires much effort and ingenuity.

What the Quartermaster Corps Expects from Paper Products*

By Major Robert R. Melson, Q.M.C.[1]

Abstract

The packaging of subsistence items for overseas shipment has made definite progress during the past year. A bag pack has been developed and the "Arsenal" type wax-dipped box has been successfully applied in a number of instances. Many problems still are unsolved and performance requirements are being introduced into specifications, so far as is practicable, to stimulate development and ultimately to provide a greater choice of available materials for wartime food packaging.

A year ago at the Boston meeting of the Technical Association of the Pulp and Paper Industry, ten problems that were facing the packaging group of the Quartermaster Corps were presented. Before current developments are discussed, it may be of interest to make a brief progress report on the status of these problems.

Development

The first problem concerned weatherproof solid paperboard boxes and the development of watertight shipping cases. Much work was done in attempting to seal a variety of shipping containers so that they would be watertight when submerged. Asphalt was used as a dipping material, painted on, extruded in a semi-plastic state and applied in other ways. These cases were tested for watertightness by submersing in water after mechanical abuse. It was found that a high percentage of the boxes were watertight before mechanical abuse, but the percentage dropped sharply after the cases were handled and subjected to a number of falls, especially when cold. The percentage of watertight cases that could be expected from a production line was so low with these methods that other means of waterproofing were sought. The requirement of watertight shipping cases has been largely met by the use of watertight unit packages inside the case and by using watertight case liners in the form of bags.

The second problem was that of producing satisfactory water vapor resistant sheets. During the last twelve months, a large number of new films, mostly of the laminated type, have been investigated and while the objective in moisture protective films has not been reached, they have been substantially improved. The biggest development in this field has been with materials which lend themselves to conversion into large bags which are used quite extensively at the present time.

The third problem was related to the protection of food against infestation by insects. Up to the present time, there is not a flexible packaging material available which is proof against insect infestation. Considerable work is being done along this line by the Massachusetts Institute of Technology, the Department of Agriculture, and the University of California. The Cadelle (*Tenebroides mauritanicus* [L]) seems to be the most difficult insect to stop and unfortunately it is well distributed throughout the theaters of military operations. This insect bores for sheer pleasure and, although it may not materially damage the food itself, the hole produced provides a method of entry for other insects. The Cadelle readily eats through wood, foil, asphalt laminated bags, wax impregnated board, etc. Recently very encouraging results have been obtained by incorporating a ply of sand paper in the board from which the cartons are made.

The fourth project which was presented was that of packaging dried fruit. At that time the problem was to hold dried fruit having a moisture content of approximately 22%. Protection from loss or gain of moisture, mold growth, and insect infestation were required. These difficulties have been partially overcome by further reducing the moisture content of the dried fruit to approximately twelve percent. This greatly reduces the likelihood of mold growth. It was also necessary to choose a type of package that could be adapted to commercial production lines. At the present time, this extra dry fruit is being packed

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[1]Quartermaster Corps Subsistence Research Laboratory, Chicago, Ill.

in an "arsenal" type paper box which is wax impregnated and coated after sealing. This carton has a fairly large opening compared to its depth and lends itself quite well to dried fruit packing lines. Although the wax impregnated and coated board is not proof against insect infestation, it is moderately resistant as compared with previous packs.

The fifth topic considered was that of obtaining a wax paper sheet which was flexible at 20° F. below zero and not excessively tacky at 130° F. Comparatively little progress has been made in this direction.

The sixth point covered was that of waterproof as well as water vapor resistant papers. In the past year great progress has been made in the production and especially in the use of these types of papers. Specifications today embody three types of watertight and water vapor resistant bags which have greatly improved the Quartermaster Corps overseas packages. Advancement has been made in durability, flexibility, sealing, and waterproofness.

The seventh problem was in expectation of being required to package lard and other shortenings in flexible packaging materials. Some interesting work has been done along these lines and a promising pack has been developed. However, up to date, all aspects of the problem have not been completely solved and, in the meantime, the metal containers will continue to be used.

The eighth problem was that of prevention of the transfer of oxygen through flexible packaging materials. This was in anticipation of requirements which did not develop, and because of more pressing problems, as far as is known, very little work has been done on it.

The ninth project concerned composite paper board cans with particular reference to improvement in the water vapor protection of the body and the tightness of the end seams. Water vapor protection of paper board cans has been materially increased by including more and better water vapor resistant materials in the body and, in one instance, by including a lead foil in the plies forming the can body. It has been found that end seams can be made more securely watertight by treating the ends of the body with amorphous wax before seaming on the top and bottom, or by using a suitably treated outer water resistant liner.

The final problem presented last year was that of securing shipping cases which were proof against damage by rats. This subject has been considered, but little progress made, because of its difficult nature. However, investigation has recently been stimulated and work is being carried on with the Wild Life Research Laboratory of the U. S. Department of Interior.

During the last twelve months numerous new problems have arisen. Some of these have been solved; others are still at hand. A number of packaging materials have become less available in the past year and few, if any, more available. Essentially, the same basic problem as last year is faced—that of packaging hygroscopic food products so they can be shipped to all parts of the world to feed American fighting men.

Laminated Bags

Pulp and paper products are serving in a wider variety of places this year and under increased performance requirements. In the last few months the packaging of cereals has been redesigned for greater water vapor protection and mechanical strength. These packs were designed to use what are substantially domestic unit packages, with the necessary overseas water vapor protection provided by means of a single large laminated bag that incloses a number of the unit cartons. This permits the maximum use of present packaging machinery and also the most economical uses of suitable overseas type packaging and packing materials since, as far as the laminated bag is concerned, it is a bulk pack.

The laminated bags being used for this purpose and for similar packs on dehydrated soups and vegetables consist of creped kraft paper laminated to creped kraft paper using large amounts of asphaltic type compounds. These bags may be of two or three plies in thickness and the basis weight of the kraft paper and the amount of asphalt laminating agent may vary. The size of the bag, weight of the contents, and the water vapor protection required, control these variables. The kraft paper may be creped in one or both directions depending on the particular requirement. The bags manufactured of these materials are closed preferably by means of a pressure sensitive strip of sealing agent applied around the mouth of the bag.

At the present time, the supply of these bags is very limited. The Quartermaster Corps expects to use a large number of them in packaging a number of foodstuffs and more suppliers are needed.

The multiple functions of these laminated bags require that they have the following physical characteristics:

The bag must provide a watertight barrier. A heavy continuous film of asphalt is being used at the present time to achieve this. A high degree of resistance to the penetration of water vapor is also necessary. The water vapor transmission rate of some of the bags now being used is 0.25 gram per 100 square inches per 24 hours, after creasing, when tested according to the Institute of Paper Chemistry method. While it is believed that this transmission rate affords fairly adequate protection, it is desirable to reduce it.

In order to withstand mechanical abuse the bag must be pliable, especially at low temperatures. It must conform to the eight sharp corners of a shipping case and retain its functional qualities under the severe handling conditions of war time transportation through extreme temperature variations. In addition to being able to be stretched, the bag must have a high degree of strength and durability, because it will be required to enclose an average load of 45 pounds.

The method of closing the bag must be adaptable to many production lines without the addition of expensive equipment. The final closure must, of course, be waterproof and stand abuse as well as does the bag itself.

Because it is impossible to predetermine the storage life of a package, all the materials used must be odorless so as to preclude contamination of the food, even at high air temperatures.

With the employment of the bag just described, it will be understood that master cartons or corrugated cases are placed inside the bag and, after sealing, this assembly is placed in a shipping case. This type of pack is basic in design and offers considerable packaging possibilities when more bags with a wider variety of desirable properties are available.

Increasing the availability and improving the performance of this "Commando" type bag is one of the pulp and paper industries best opportunities to make

a substantial contribution to present war time food packaging. It combines water vapor protection, watertightness, maximum use of present packaging machinery, simplicity and economical use of materials.

In connection with this subject, it has been very difficult to obtain an asphaltic laminating agent that is odorless and sufficiently flexible at low temperatures. Considerable improvement has been made over the asphalt commonly used in waterproof paper but a better product is badly needed. When waterproof paper complying with Federal Specification UU-P-271 "Paper, Kraft, Wrapping, Waterproofed," is desired, an exception to the bleeding test has been made, and the temperature for this test reduced from 180° F. to 145° F. This will permit an asphalt with a correspondingly lower plasticity range. This can be done safely because, unlike many other uses, subsistence items invariably have protection against damage caused by slight bleeding of the laminant in the outer bag. Although asphaltic laminating agents for waterproof bags have been discussed, other combinations of materials accomplishing the same end will certainly be considered.

"Arsenal Type" Board

Last year the use of a wax-impregnated and coated carton that Ordnance had developed for packaging small arms ammunition was mentioned. In the past twelve months, this type of packaging has been adapted to the Mountain Ration, Jungle Ration, K Ration, 5-in-1 Ration, 10-in-1 Ration, Flight Lunch, and dehydrated evaporated fruits. This type of package has been very successful and has filled a substantial gap in Quartermaster Corps packaging requirements. From a pulp and paper standpoint, the interest in this package lies in the furnish of the "arsenal" type board. It is manufactured with a high percentage of corrugated clippings, well sized to prevent excessive water pick up and fabricated to a density that permits the required wax penetration.

The application of this type of packaging indicates that an increasing amount of this grade of board will be used and expansion of mill capacity to produce this board is highly desirable.

Problems

Certain types of round composite paperboard cans are used for packaging dessert powder, cocoa, cocoa beverage powder, hard candy, baking powder and similar products. Although many of these cans have been used, their popularity has been decreasing because of the tendency of the can body to become disengaged from the metal ends. Attention is being paid both to rectangular composite fiber cans and bag-in-carton types of packages to replace these.

The unit package of certain dehydrated soup and cereal packages and of whole wheat biscuits, C square biscuits and salt tablets may be wax-paper wrapped. Considerable difficulty has been encountered with tearing and puncturing at the corners. The ruggedness of wax papers over the whole temperature range needs improvement. Paper of a heavier basis weight, the use of kraft paper, and the development of laminated sheets represent the efforts to improve this type of material. More ideas are needed.

There is a gap in satisfactory packages for holding products in the range of 5 to 10 pounds. The package should combine the required water vapor protection, durability in its own liner, and should lend itself to rapid assembly, filling and closing. The obtaining of a tight seal on a production basis is one of the most difficult problems.

At the present time, the packaging of dehydrated white potatoes, sweet potatoes, beets, and rutabagas in flexible packaging materials is being done successfully. Two other dehydrated vegetables, cabbage and carrots, are packed in hermetically sealed tin cans in an atmosphere of inert gas. Little, if any, work has been done up to this time on gas packing in flexible packages. Although it is not a particularly pressing problem today, some information on the use of flexible packages for inert gas packing is desired.

Performance Requirements

In the more recent Quartermaster Corps specifications, performance requirements are being included in many instances. This is being done primarily because it is often difficult to accurately specify the exact materials possessing the desired properties—e.g., an asphalt that has ample flexibility at 20° F. below zero. Secondly, a performance specification acts as a check on the efficiency of the packaging operation being done. These performance specifications also often reveal particular weaknesses of a pack and indicate to the manufacturer or the Quartermaster Corps where the package should be improved. By the use of performance specifications, it is hoped to be able in the future to permit greater flexibility in the employment of available materials. Such a course would, undoubtedly, stimulate both the packer and the manufacturer of packaging materials to continue with aggressive development work.

The packaging of Quartermaster Corps items has not reached the ultimate stage of development. Conditions under which this packaging must perform are inconceivably bad. Recent pictorial reports from the South Pacific theater of operations portray unavoidable conditions almost beyond description. Military packaging must be improved and must continue to receive the unqualified support of the pulp and paper industry.

Kalamazoo TAPPI Meets

The Kalamazoo Valley Section of the Technical Association of the Pulp and Paper Industry met at the Columbia Hotel, Kalamazoo, Mich., on November 4, 1943. A brief business session followed the dinner. The evening's activities were highlighted and concluded by an illustrated discussion on "Canadian Game Fish" by Mr. W. G. Curry of the Kalamazoo Vegetable Parchment Company.

The following members and guests were present: Ralph Atkins, P. W. Bartholomew, Fred L. Chappell, W. G. Curry, Paul de Guehery, Jack Dickson, Brit Freeman, Charles E. Gardner, R. C. Germanson, F. R. Hamilton, W. F. Hathaway, J. A. Heenan, Chas. P. Kirchen, R. T. Washburn, D. W. McArthur, Al Perlick, A. L. Sherwood, Peter Talbot, E. B. Taylor, H. O. Ware and Frank Whittington.

Lieut. Col. Brewer Gets Promotion

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 8, 1943—Lieutenant-Colonel John H. Brewer of the Army Air Force, formerly of Storrs & Bement Company, and formerly secretary and vice-president of the Boston Paper Trade Association, was recently promoted. He is stationed at Seattle and is commanding officer of that area.

Improvements in Continuous Pulp Washing

By J. H. Noble[1] and J. P. Rich[2]

Abstract

The present American pulp market permits a fair margin of profit but with the end of the war will come the necessity for rigid economies in order to hold our share of business. Reduction of soda consumption is an important method of cutting costs.

Loss of soda occurs through three departments - - namely, causticizing, recovery, and wash room. Modern continuous causticizing systems together with lime kilns have practically eliminated both soda and lime waste.

Improved furnace operation and electrical precipitators have cut down consumption of soda materially. Improved wash room operation has resulted in real progress but there is opportunity for further savings in this department, although,the salt cake make-up requirement 15 years ago was 350-400 pounds per ton it is now only 200-300 pounds and in one or two mills below 200 pounds per ton.

We are warranted in studying the washing problem with the ultimate goal of reducing the loss in a soda mill to 10 pounds, in a bleached sulphate mill to 15 pounds, and in a board mill to 20 pounds per ton.

This paper reviews the best modern practice outlining the layouts, mechanical equipment, and methods of control by full use of instruments and manpower. It includes other steps not yet worked out which will further simplify and reduce the cost of wash-room operation. The latest method of sulphite washing is also outlined.

Conclusion is that by the use of the best methods the pulp can be washed clean which is the primary purpose of the washers; and that improvement in the wash room together with those already made in the causticizing and recovery departments will lower the salt cake consumption to 150 pounds and result in cleaner pulp.

Introduction

The present American pulp market permits a fair margin of profit, but with the end of the war the necessity for rigid economies will become more pressing in order to maintain a competitive position with world markets. Reduction of soda or salt cake consumption through improved washing is one of several items which should be given consideration.

Loss of soda occurs through three departments—namely the causticizing, the recovery units, and the wash room. Modern continuous causticizing systems together with lime kilns have practically eliminated both soda and lime waste from the first named department. Better furnace operation and installation of electrical precipitators have cut down consumption of soda materially in the recovery units. Progress has been made in wash-room operation but there is much room for further improvements. Although salt cake make-up 15 years ago was 350-400 pounds per ton it is now only 200-300 pounds per ton, and in several mills below 200 pounds per ton. One mill is actually using less than 200 pounds per ton of salt cake without a precipitator. We are warranted in taking time to study the washing problems with the ultimate view of reducing the loss in the wash room of a soda mill to 10 pounds or less per ton; in a bleached sulphate mill to 15 pounds, and in a paperboard mill to 20 pounds per ton or less. It is recognized that the problem in paperboard manufacture is more difficult, because the quantity of insoluble chemical in pulp for paperboard is higher.

The primary purpose of a washing system is to wash the pulp clean and at the same time use a minimum quantity of fresh water. In many cases the order is reversed, and undue attention is given to making strong liquor for the evaporators rather than clean pulp.

Vacuum Washing of Pulp

The flow of pulp and liquor is through 3-stage continuous vacuum washers, and results actually obtained over a considerable period of time will illustrate the method of economical operation. Six or seven years ago, washing losses were 75-100 pounds; today they are cut to 25 pounds per ton of chemical.

The pulp is discharged into a conventional blow tank with bottom agitator and is diluted to approximately 2% at the agitator part of the tank. The density is further reduced with weak liquor to 1% at the primary washer. Weak liquor from the second washer is applied to the primary washer and the intermediate repulper. Weaker liquor from the third washer is applied to the second washer in the repulper following this washer, and fresh water is added only on the third washer. There is no outlet of liquor from the system to the sewer.

First of all, it is assumed that the consistency and volume of the pulp entering the washer is well-regulated. The same principles which apply to modern cylinder machines are also proper for a pulp washer; in other words, correct inlet design and velocity and clearance between the vat and the cylinder. If a good sheet is formed there is little difficulty in washing the pulp economically. Conversely, if sheet formation is poor, washing will be poor, soda loss high, and liquor will be weak.

Addition of black liquor during the blowing cycle is an advantage—i. e., if sufficient liquor is added so that the stock in the blow tank is reduced from 10% to 6% or 7%, the stock washes more readily. This practice is borrowed from pan operation, where it was found that keeping the unwashed pulp in a liquid state, speeded up the washing.

Thorough removal of liquor from the stock is not accomplished merely by displacement. This is due to the fact that soda is not all readily soluble, also coarse particles in the sheet interfere with even penetration of liquor or water. To overcome this

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[2] Member TAPPI; Chief Engineer, Improved Paper Machinery Corp., Nashua, N. H.

condition, a certain soaking time is required, therefore it has been found essential to break up and scrub the pulp in the repulper. The design of this part of the equipment should be such that the agitator is fully submerged in order to eliminate air which causes foam and prevents proper formation on the next cylinder. Three washers and two agitators give satisfactory results when washing pulp cooked for wrapping paper or bleaching.

The salt cake content of the pulp leaving the first washer is approximately 500 pounds per ton, leaving the second 50-60 pounds per ton, and the last 15-20 pounds per ton. Pulp for paperboard is of course more difficult to wash for the reasons mentioned above—namely, because it contains many coarse fibers, and the only way in which soda can be fully removed from this type of pulp is by additional soaking. This point has been proven in a specific case by the installation of a stock chest ahead of a final washer so that the pulp receives about 40 minutes retention time. Previous to the installation of the chest the salt cake content was 60 pounds per ton; the chest reduced this to 25 pounds per ton. All salt cake figures mentioned are determined by an ash test so as to include the insoluble soda.

Another important factor which has improved operation materially is better and wider use of control instruments. These include a consistency regulator, liquid level recording gages and fresh water meters. Some operators use a sheet thickness gage, although a stock volume meter would be an improvement over this device and more accurate. A continuous pH recorder operating on a continuous sample of washed pulp is another possibility.

As we recall the troubles of past years when everything surrounding the wash room was hand controlled, and there were too many convenient outlets to the sewer, we begin to appreciate what instruments have contributed to the all important item, "Control".

The elimination of vacuum pumps together with traps, receivers, etc., has not only saved power but reduced tendency to foam. It is difficult to eliminate foam altogether, but by exercising moderate care in mixing the stock with liquor under submergence it can be reduced so that there need be no foam in the washer vats nor in the yard adjacent to the liquor tanks. The filtrate tanks which receive the liquor from the washer are now designed so that liquor entering the tank receives a minimum of agitation. Several effective breakers have been devised for reducing the foam that is created and naturally rises to the top of the tanks.

The question often arises "How low is it possible to wash pulp and maintain an economical operation?" This depends on local conditions including cost of steam, but with the advent of quintuple and sextuple effect evaporators the cost of evaporation is extremely low, particularly in the south.

Table I presents the steam requirement and the cost based on 20 cents per 1000 pounds of steam, to evaporate the water from various Baume readings from approximately 10° up to 15° at 60°F.

TABLE I

Solids, %	Degrees Bé at 60° F.	Quintuple evaporator lb. steam per ton pulp	Steam cost per ton pulp at 20c/1000 lb.
15.0	10	3604	$0.72
16.5	11	3110	0.62
18.0	12	2700	0.54
19.5	13	2356	0.47
21.0	14	2059	0.41

For example, the steam saving, in raising the strength of liquor from 12-13° Be is less than 7c per ton. Since the value of salt cake is approximately 1c a pound it follows that it is much more economical to lose 1° strength of liquor or less than 7c a ton cost and thereby save 10 pounds of salt cake or 10c a ton, than to operate on the reverse basis.

This is one reason why it is worth while to stress the saving of the last few pounds of salt cake. Further if a mill operates a closed system there is no chance for chemical loss from the wash room, and the operator can then give the equipment more attention than if he is allowed to bleed some weak liquor to the sewer, or has lattitude in the quantity of chemical he is allowed to waste. It also eliminates stream pollution—a knotty problem at best. Following the wash room, some of the insoluble chemical is released from the pulp through the scrubbing action of the screens. If the screen room receives more than the minimum of chemical from the wash room, the screen room operation is curtailed because of foam trouble, and therefore serves as a check on the operation of the wash room. If the pulp is to be bleached it is obvious that it must not contain excess alkali; otherwise extra bleach must be used to offset the organics combined with the alkali.

Finally, we conclude that by using the methods which have been worked out between the mill operators and equipment manufacturers, the pulp can be economically washed to a low chemical content. Improvements in the wash room together with those already made in the causticizing and recovery departments will result in lowering the salt cake consumption to 150 pounds per ton or less and result in better pulp quality, and permit the operators to turn their attention to possible savings in other parts of the process.

So You Want to Be a Chemist

The McGraw-Hill Book Company has published a very entertaining and informal 128-page book entitled "So You Want To Be a Chemist" by Herbert Coith. The author has a broad concept of the chemists responsibilities to his fellow men and to society. It is primarily of value to the chemist in his twenties who is starting out in industry. Among the subjects covered is the work of the industrial chemist as it relates to raw materials, processes and finished products from the point of view of the company and of the customer. The work of the analytical chemist in establishing and maintaining standards and specifications for processes and materials is outlined. The work of the chemist in research and development is covered showing how he must keep abreast of changes in markets, styles and living habits, improving storage methods, finding substitute materials, etc. A chapter is devoted to the products service department in serving the customer and helping to solve his problems and also helping the sales and advertising departments. Other subjects include the work of the chemist in wartime, factors to be considered by the chemist in planning his career in industry and the qualities and skills of the chemist wanted by industry.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York, N. Y. at $1.50 per copy.

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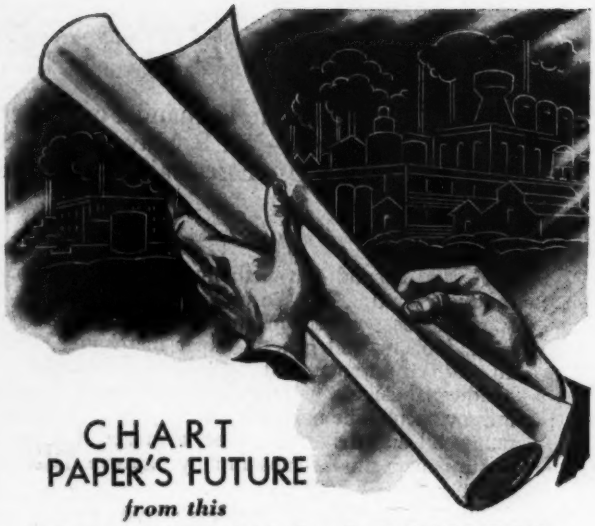

CHART PAPER'S FUTURE *from this* STARTLING PREVIEW

To be among the first to see a startling new chart of industry—visit the 19th Exposition of Chemical Industries at New York's Madison Square Garden, December 6-11.

As a summary of current achievements in chemistry and engineering and a preview of the future, this Exposition deserves the attention of every chemist, engineer and executive in the pulp and paper industry. From what you can see . . . from what you can hear when you talk to the experts in attendance at exhibits . . . may come the answers to many otherwise baffling problems. It's the right place to seek the "know-how" you need to carry on in these days of conservation, restrictions on manufacture of paper articles, substitute materials and other necessary wartime handicaps.

Marvels in the production of new substances by chemical methods with their counterpart in special processing equipment are still necessarily in part a war secret. Many details that may be revealed however, including not a few bearing on post-war plans, will form a leading interest at this year's Exposition of Chemical Industries.

Important decisions regarding the post-war activities of manufacturers may be made as a result of this Exposition. Much of the information to be disclosed reflects either the creation of new industries and their products, or the conversion of existing plants to new uses—to help win the war now, to help rebuild the world after Victory has been won. To be among the first to see the startling new chart of industry, visit this year's Chemical Exposition—and bring your associates.

19th EXPOSITION OF CHEMICAL INDUSTRIES
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New York Paper and Pulp Market Review

Wholesale Demand For Paper and Many Paper Products Continues Heavy—WPB May Act To Strictly Allocate Wood Pulp Through End-Use Essentiality—More Roofing Rags Now Required By Mills.

Office of the PAPER TRADE JOURNAL.
Wednesday, November 10, 1943.

Heavy demand for virtually all paper and paper products continues to be only partially satisfied, despite the best efforts of manufacturers' representatives, jobbers, and general paper merchants to meet all trade requirements. Manpower continues to greatly handicap business activity, with not much hope for improvement. The nation-wide campaigns to cut more pulpwood and drives to collect a greater tonnage of waste paper, should substantially improve the supply situation in the future.

The index of general business activity for the week ended October 30 rose to 139.1, from 138.8 for the previous week, compared with 133.1 for the corresponding week last year. The index of paper board production was 133.9, compared with 135.6 for the previous week, and with 128.9 for the corresponding week last year.

Paper production for the week ended October 30 was estimated at 89.5% compared with 92.9% for 1942, with 108.6% for 1941, with 85.6% for 1940, and with 98.0% for the corresponding week in 1939.

Paper board production for the week ended October 30 was 94.0%, compared with 84.0% for 1942, with 99.0% for 1941, with 80.0% for 1940, and with 84.0% for the corresponding week for 1939.

The WPB states in reference to Limitation Order L-317, covering fiber shipping containers, that such containers rejected during the course of manufacture, or upon delivery through error in size, printing, etc., are to be considered as new containers and not "reject boxes", under this order.

Application of certain price maximum regulations to imports is covered in Supplementary Order 78. It makes the provisions of 16 regulations for the purchase, sale and delivery of such commodities if they originate outside of and are imported into the continental United States. This codifies existing interpretations, with no change in administrative policy. The ruling became effective on November 4, 1943.

Wood Pulp

Plans are in preparation for a drastic control of wood pulp by the WPB through means of a strict end-use allocation of pulp, to provide essential production for war needs. Although latest reports indicate some improvement in the supply situation, the opinion in some quarters reflects a need for this tighter control to meet the very heavy government purchasing, particularly in container board.

The wood pulp market is strong, with prices firmly maintained by the heavy demand.

Rags

Mill buying of new cotton cuttings is heavy in comparison with limited supplies. Prices are firm.

Demand for the roofing grades of old cotton rags is in excess of supplies at this date. Some quarters assert that this is due to government regulations which do not permit the use of other than roofing grades by felt mills. Other grades of old cotton rags are less active.

Old Rope and Bagging

Mill requirements for old Manila rope continues in excess of available supplies.

The scrap bagging market is reported firmer at this date, with belief in some quarters that more improvement may be expected with the easing of wartime regulations to permit a less restricted use of bagging. Prices continue nominal.

Old Waste Paper

Mill demand for paper stock continues most urgent. To avert a more serious situation, every business concern and individual is being urged to save old waste paper and not to destroy it. To meet the heavy requirements of board mills this year, about 2,000,000 additional tons of paper stock will be required to maintain the needed paper board production.

Prices of paper stock are firm under a heavy demand, with mills paying ceiling prices.

Twine

No important change in the limited twine market has been reported this week. In view of the scant trade supply in most standard grades, quotations are for the most part of a nominal nature.

Teaching Forest Resources

A new enlarged educational bibliography listing materials for teaching forest resources and conservation has just been published by the School Department of American Forest Products Industries, Inc.

The new edition, printed in black and green in AFPI's standard 6 x 9 size, describes and illustrates the three supplementary texts, forest map, forest products chart, series of four posters, and motion picture available to teachers upon request.

Two added features highlight the new publication —suggestions for teaching, made by a well-known text book editor, giving teachers an idea of where and how to use AFPI literature and visual aids; and suggestions for ordering, giving instructions for requesting classroom quantities of material.

Distribution of the new catalog will begin immediately to those teachers and school officials who have used the motion picture, TREES FOR TOMORROW, but are not using AFPI's literature and poster material. Teachers may have the catalog upon request; school officials may have bulk supplies for distribution to their teachers; and forest industry organizations may have copies for distribution to their local schools. Orders addressed to American Forest Products Industries, Inc., 1319 18th Street, N. W., Washington, D. C., will be filled promptly.

Be of Good Cheer!

Christmas comes again and brings us this opportunity to extend Season's Greetings to our friends, all now striving valiantly on the Home Front . . . . . Tenax Felts are doing their modest part. We pledge our earnest cooperation until this war is won.

A Merry Christmas and a Happy and Prosperous New Year is our Sincere Wish for you

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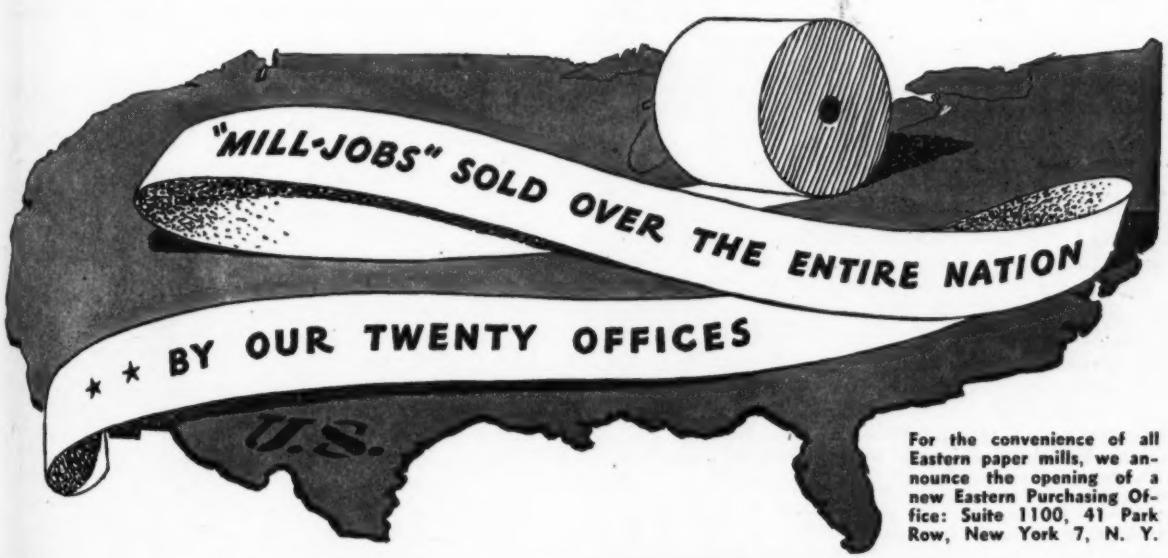

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MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL.
Wednesday, November 10, 1943.

BLANC FIXE—The market for blanc fixe continues to conform to prevailing prices. Current demand is reported fair. The pulp is currently quoted at $40 per ton, in barrels, at works; the powder is currently quoted at $60 per ton.

BLEACHING POWDER—Current demand is reported active. Supply situation satisfactory. Bleaching powder is currently quoted at from $2.50 to $3.10 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 24 cents per pound; 2,000 pounds, 24¼ cents per pound; less than 2,000 pounds, 24¾ cents per pound, f. o. b. shipping point. Imported casein 10¼ cents per pound, f. o. b. source.

CAUSTIC SODA—Supply situation still tight, as demand for dry caustic soda is reported in excess of production. Prices continue unchanged. Solid caustic soda is currently quoted at $2.30 per 100 pounds. The flake and ground are currently quoted at $2.70 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CHINA CLAY—Demand for some grades of china clay is reported moderate this week. Domestic filler clay is currently quoted at from $7.50 to $15 per ton; coating clay is quoted at from $12 to $22 per ton, at mines. Imported china clay is currently quoted at from $13 to $25 per long ton, ship side.

CHLORINE—The market situation is reported tight, due to heavy war orders. Production continues high. Prices remain unchanged. Chlorine is quoted at $1.75 per 100 pounds, in single-unit tank cars, f. o. b. works.

ROSIN—Higher prices are quoted on some grades of rosin this week. "G" gum rosin is currently quoted at $4.12 per 100 pounds, in barrels, Savannah. "FF" wood rosin is currently quoted at $4.11 per 100 pounds, in barrels, New York. Seventy per cent gum rosin is currently offered at $4.31 per 100 pounds, f. o. b. works.

SALT CAKE—Demand reported moderate. Quotations on salt cake continue to remain unchanged. Domestic salt cake is currently quoted at $15 per ton, in bulk. Chrome cake is currently quoted at $16 per ton.

SODA ASH—Market for soda ash continues to be reported as tight. Prices continue to conform to prevailing quotations. Prices on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—Cash corn reported coming into market slowly in fair volume. Market still tight. Quotations continue unchanged. Pearl is currently quoted at $3.10 per 100 pounds. The powdered grade is currently quoted at $3.20 per 100 pounds. All prices f. o. b. Chicago.

SULPHATE OF ALUMINA—Market situation in sulphate of alumina is reported satisfactory this week. Quotations continue unchanged. Prices on the commercial grades are quoted at from $1.15 to $1.25 per 100 pounds. The iron free is currently quoted at $2.35 per 100 pounds. All prices in car lots, in bags, f. o. b. works.

SULPHUR—Demand is reported steady for sulphur. Quotations on all grades continue unchanged. Annual contracts are currently quoted at $16 per long ton, f. o. b. mines. The current contract price at Gulf Ports remains unchanged at $17.50 per long ton.

TALC—Demand is reported moderate on some grades of domestic talc at this date. The domestic grades are currently quoted at from $16 to $21 per ton, at works.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

News, per ton—

Roll, contract	*$58.00	@	—
Sheets	64.00	"	—

* OPA Maximum Price.

Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill

Superstandard Wrapping	*$5.25	@	—
No. 1 Wrapping	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag	*4.375	"	—

* OPA Manufacturers' Prices.

Tissues—Per Ream—Carlots

White No. 1	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½	1.00	"	—
White No. 2	.90	"	—
Anti-Tarnish M.F.	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—

Toilet—1 M. Sheets—Per Case

Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet	5.70	"	—

Paper Towels, Per Case—

Unbleached, Jr.	2.60	"	—
Bleached, Jr.	3.20	"	—

Manila—per cwt.—C. l. f. a.

No. 1 Jute	11.25	@	—
No. 1 Manila Wrapping, 35 lb.	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.	5.75	"	6.00

Boards, per ton—

News	*48.00	@	—
Chip	*45.00	"	—
Sgl. Mla. Ll. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.. "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White. Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1	$10.55@$12.75	$11.70@$14.25
No. 2	9.65 " 11.75	10.80 " 13.25
No. 3	9.20 " 11.25	10.35 " 12.50
No. 4	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White, Cased Paper, Delivered in Zone 1:

No. 1 Glossy Coated	$13.65	@$13.9
No. 2 Glossy Coated	12.40	" 14.0
No. 3 Glossy Coated	11.60	" 13.2
No. 4 Glossy Coated	11.15	" 12.7
No. 1 Antique (watermarked)	10.25	" 11.7
No. 2 Offset	9.60	" 11.0
A Grade E. F.	9.35	" 10.7
A Grade S. & S. C.	9.60	" 11.0
B Grade E. F.	8.85	" 10.2
B Grade S. & S. C.	9.10	" 10.5
C Grade E. F.	8.55	" 9.7
C Grade S. & S. C.	8.80	" 10.0
D Grade E. F.	8.25	" 9.5
D Grade S. & S. C.	8.50	" 9.7

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight, Not Exceeding OPA Allowances.

Bl. Softwood Sulphite		$76.0
Unbl. Softwood Sulphite	65.00	@ 66.0
Bl. Hardwood Sulphite		73.5
Unbl. Hardwood Sulphite		63.5
Bl. Mitscherlich		81.0
Unbl. Mitscherlich	72.00	@ 82.0
N. Bleached Sulphate		86.0
S. Bleached Sulphate		79.0
N. Semi-Bleached Sulphate		82.0
S. Semi-Bleached Sulphate		75.0
N. Unbl. Sulphate		73.0
S. Unbl. Sulphate		63.5
Bl. Soda		66.0
Unbl. Soda		62.0
Groundwood		46.0

Transportation Allowances Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area)	10.50
West Coast (out area)	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area)	9.50
West Coast (out area)	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area)	7.50
West Coast (out area)	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices

Domestic Rags

New Rags

(Prices to Mill f. o. b. N Y.)

Shirt Cuttings—New White, No. 1	6.50	@	7.25*
Silesias No. 1	—	"	5.75*
New Unbleached	6.75	"	7.50*
Blue Overall	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

SONOCO PAPER MILL CORES

RHINO NON-RETURNABLE

For all uses requiring an extremely tough non-returnable paper mill core.

ENDURO—Very high grade returnable core to meet extra demand for strength. Shown with Bermico ends. Taylor ends available.

DURO—Standard returnable core of plus standard quality. Shown with Taylor ends. Also available with Bermico ends.

BERMICO—A returnable fibre core—extremely hard, strong and rugged. Treated to resist weather and moisture changes.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.

SHIPPING POINTS: LOWELL, MASS. HARTSVILLE, S. C.

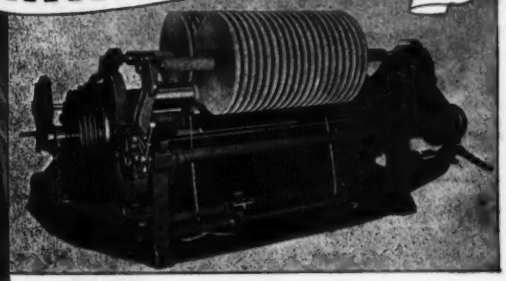
DEPENDABLE SOURCE OF SUPPLY

ARMY E NAVY

BERMICO*

*Exclusive distributors for Bermico Ends and Bermico Fibre Cores.

Another WAR JOB for CAMACHINE 28-3



AIR AND OIL FILTERS help to keep our planes flying and our motorized equipment rolling. In mechanized warfare, millions of paper filter discs are needed. These discs are stamped out of specially treated paper. Jumbo rolls of the treated paper are slit into strips of the width required and rewound onto rolls ready to feed to die-cutting machines. Converting these rolls is a CAMACHINE job. CAMACHINE 28-3 does it so fast and so well that one CAMACHINE is sufficient to keep 20 die-cutting presses supplied with paper. Write for interesting folder.

CAMERON MACHINE COMPANY, 61 Poplar Street, Brooklyn, New York
MIDWEST OFFICE: Harris Trust Building, 111 West Monroe Street, Chicago

PRICE & PIERCE »»»»»»»»ltd•

Wood Pulp & Paper Agents

60 East 42 Street
New York, N. Y.

Old Rags

White, No. 1—			
Repacked	*3.80	"	—
Miscellaneous	*3.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags

New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25

Old Rags

No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

All Prices Nominal

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	.17½	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—

(Hard Fiber)

Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila	-	"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White No. 1	.07½	@	.07½
New White No. 2	.04½	"	.05
Light Silesias	.04½	"	.04¾
Silesias, No. 1	.04	"	.04¼
Black Silesias, soft	.03¾	"	.04
New Unbleached	.07¼	"	.07½
Washable Prints	.03¼	"	.03½
Washable No. 1	.02	"	.02¼
Blue Overall	.04½	"	.05½
Cottons—According to grades—			
Washable shredding	—	"	.01¾
Fancy Percales	.03¼	"	.03½
New Black Soft	.02¾	"	.03
New Dark Seconds	1.75	"	2.00
Khaki Cuttings—			
No. 1 O. D.	.03	"	.03¼
No. 2 Mixed	.02½	"	.02½
Corduroy	.01¾	"	.02¼
New Canvas	.04¾	"	.05¼
New Black Mixed	—	"	.02½

Domestic Rags (Old)

White No. 1—Repacked	3.80	"	—
White No. 2—Repacked	2.90	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings—			
(Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
Sisal Rope	3.75	"	—
Mixed	1.00	"	1.50
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	2.50	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	1.35	"	1.50
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	4.50	"	5.00
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	2.25	"	2.50
Wool Tares—			
Foreign	(nominal)		

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—
Misc.	2.15	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Kraft Corrugated Cuttings	2.25	"	—
Old Corrugated Containers	1.15	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—

Domestic	4.25	"	—
Aust. Wool Pouches	4.00	"	4.25
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Bagging	1.35	"	—*

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¾	"	.05
New White No 1	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06¼
Underwear Cutters, Bleached	.06¼	"	.06¾
Underwear Cutters, Unbleached	.05¾	"	.06
Silesias No. 1	.06	"	.06¼
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¾	"	—
Washable	.02¾	"	—
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03¾
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—			
Repacked	3.80	@	—*
Miscellaneous	3.20	"	—*
White No. 2—			
Miscellaneous	2.65	"	—*
Twos and Blues, Repacked	2.20	"	—*
Old Blue Overalls	2.25	"	2.50
Thirds and Blues, Repacked	2.20	"	—*
Miscellaneous	1.80	"	—*
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—*
No. 2	1.45	"	—*
No. 3	1.35	"	—*
No. 4	1.35	"	—*
No. 5, Quality A	1.35	"	—*
Quality B	1.20	"	—*
Quality C	.95	"	—*
* Old Manila Rope	5.75	"	—

* OPA Maximum Prices.

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—